

Appendix 10a:

Residential 9a (Ellerslie Racecourse) Design Guide

ACKNOWLEDGEMENTS

Thanks are due to the North Shore City Council for its generosity in agreeing to excerpts of the *Good Solutions Guide for Apartments* being used in this document.

TABLE OF CONTENTS

- 1.0 Purpose of the Design Guide

- 2.0 Building layout
 - 2.1 Streets embraced by buildings
 - 2.2 Street corners
 - 2.3 Public, semi-public and private transition
 - 2.4 Public/private interface - front yards
 - 2.5 Public/private interface - loggias
 - 2.6 Public/private interface - steps
 - 2.7 Passive surveillance
 - 2.8 Landscape design
 - 2.9 Lighting
 - 2.10 Ground level and above ground level car parking

- 3.0 Building design
 - 3.1 Building form
 - 3.2 Base, middle and top
 - 3.3 Proportions
 - 3.4 Architectural articulation and modulation
 - 3.5 Apartment typologies, layouts and mix
 - 3.6 Entrances
 - 3.7 Vertical Access
 - 3.8 Horizontal Access
 - 3.9 Communal outdoor space

- 3.10 Private open space – courtyards
 - 3.11 Private open space – balconies
 - 3.12 Outlook and visual privacy
 - 3.13 Acoustic privacy
 - 3.14 Basement car parking
 - 3.16 Materials
 - 3.17 Natural ventilation
 - 3.18 Daylight access
 - 3.19 Sustainability
-
- 4.0 Glossary of terms

1.0 Purpose of the Design Guide

The Plan requires that applications for “Planned Residential Developments”¹ and Retirement Villages must be assessed against some seventeen Restricted Discretionary Activity assessment criteria. The seventeenth criterion requires an assessment as to “whether the proposed layout and building design meets the relevant guidelines contained in Appendix 10A (Residential Design Guide for Developments in Residential 9 Zones) relating to building layout and building design.”

This document provides a set of design guidelines, against which the merits of the urban design and architectural design of any proposed development within the Residential 9a zone will be assessed.

The Residential 9a (Ellerslie Racecourse) zone applies to an area that was formerly part of the Ellerslie Racecourse and which is now zoned for redevelopment with moderately high intensity housing. The zone seeks to ensure that future development is designed and assessed in a comprehensive and integrated manner that recognises the unique physical and spatial features that make up the Ellerslie racecourse environment and its surroundings.

The design guide has been written to illustrate how building developments should respond to these contexts. It also provides guidance on best practice urban design and architectural design principles that should be brought to bear on the design of the buildings and the spaces between.

Note:

The illustrations included in this guide are indicative only. For example, in the ‘Building layout’ section, they are intended to illustrate the relationships between buildings and the exterior spaces/streets they shape, not a particular ‘style’ of architecture. Similarly, in the ‘Building design’ section, illustrations are intended to provide guidance as to the architectural design principles sought to be brought to bear on and expressed in the design and character of new buildings.

Building layout and building design should be of a high quality, demonstrating creativity and responsiveness to the character and identity of the Ellerslie Racecourse grounds and its local context.

A glossary of commonly used urban design and architectural design terms, as they apply to these design guidelines, is provided in Section 4 of this document.

¹ Planned Residential Development means development on land zoned residential 9a which comprises not less than 25 residential units where elements of the development such as building design, open space, landscaping, vehicular access, roading and subdivision are designed in an integrated manner and the total land area subject to such development includes either the whole of area A or area C or covers an area (including access roads) of not less than 1.0ha or is a residue area.

2.0 Building layout

This section outlines the building layout design guidelines that will be used to assess applications for Planned Residential Developments and Retirement Villages within the Residential 9a (Ellerslie Racecourse) zone.

The focus of this section is on the desired spatial relationship between buildings and the desired design and character of the publicly accessible exterior spaces between them.

2.1 Streets embraced by buildings



- (i) Buildings should address and align with the street boundary to the minimum heights specified in the Plan Change, in order to physically edge and spatially define the street. However, to avoid architectural monotony, minor variance from the frontage layout, such as recessed pedestrian entrances and windows, is acceptable provided that the overall continuity of the frontage is not compromised.
- (ii) Buildings should be located around as much of the perimeter of development blocks as is practicable, with communal and/or private open space generally located within the centre of the block.
- (iii) The geometry of building floor plan footprints should be shaped and aligned to follow and positively engage with the street boundaries, including those of any curved street.
- (iv) Buildings adjoining the Racecourse should be located so as to create a semi-continuous series of medium rise building facades, running generally parallel to the outer rail of the adjoining racetrack. These facades should create a strong visual boundary to the racetrack, in scale with that of the Racecourse open space, and both individually and collectively, 'embrace' the curved geometry of the track and the infield.
- (v) The street level edges of buildings should provide an attractive edge for pedestrians to walk alongside.
- (vi) Interior spaces should overlook streets and publicly accessible spaces.
- (vii) Where large sites enable the development of an extensive street building frontage, that frontage should be visually broken up through building separation and/or variation in building height, form and/or design to avoid monotonous building façades. In Area B, buildings are not to exceed 70m in length and gaps between buildings should be a minimum of 15m in width.
- (viii) Streets should be constructed in general accordance with Figure 1: Indicative Section – Streets adjacent to Racetrack (16.5m minimum width - where it is closest to the racetrack), Figure 2: Indicative Street Section – Walpole Street extension between Area A and Area B (16.5m wide) and Figure 3: Indicative Street Section for all other streets (13.5m wide).

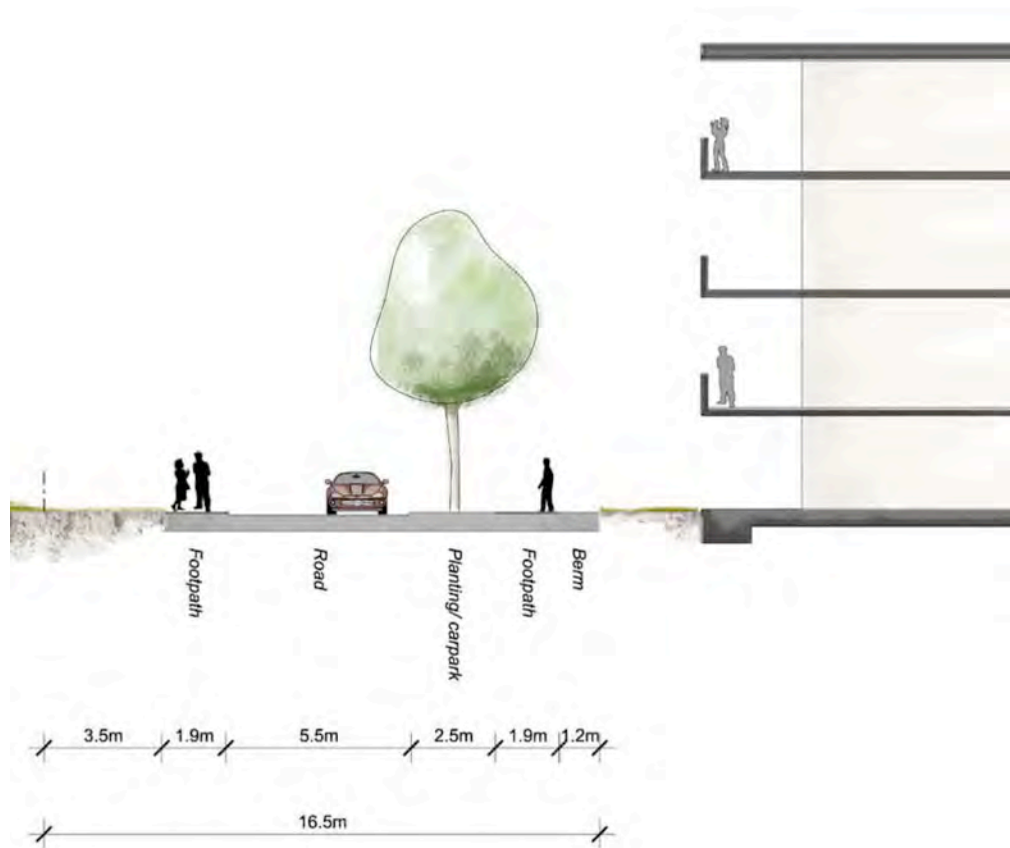


Figure 1: Indicative Section – Streets adjacent to Racetrack (16.5m minimum width where it is closest to the racetrack)

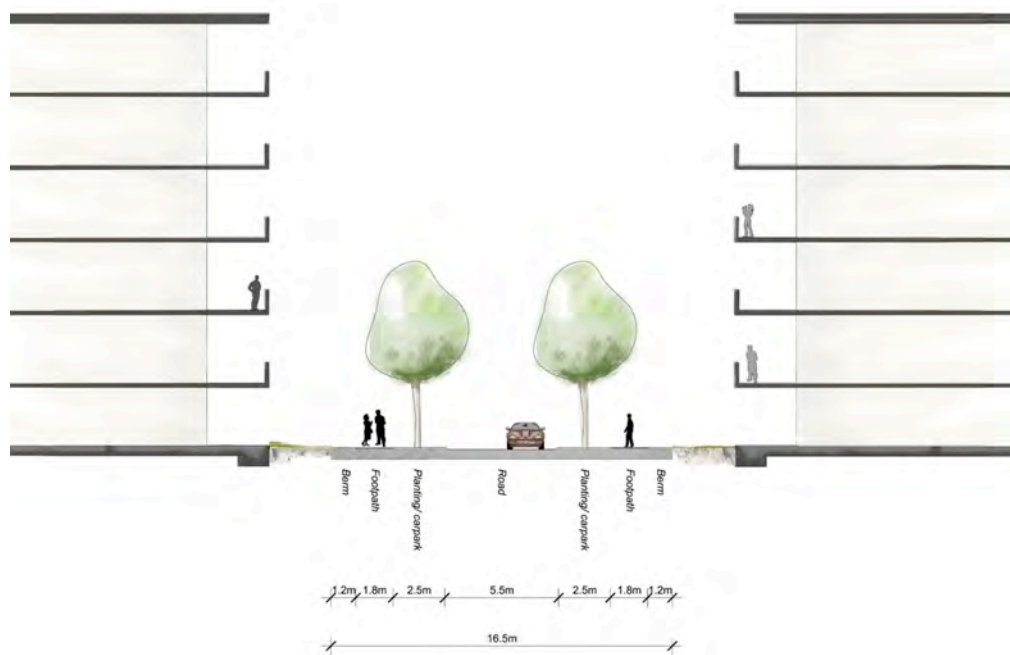


Figure 2: Indicative Street Section – Walpole Street extension between Area A and Area B (16.5m wide)

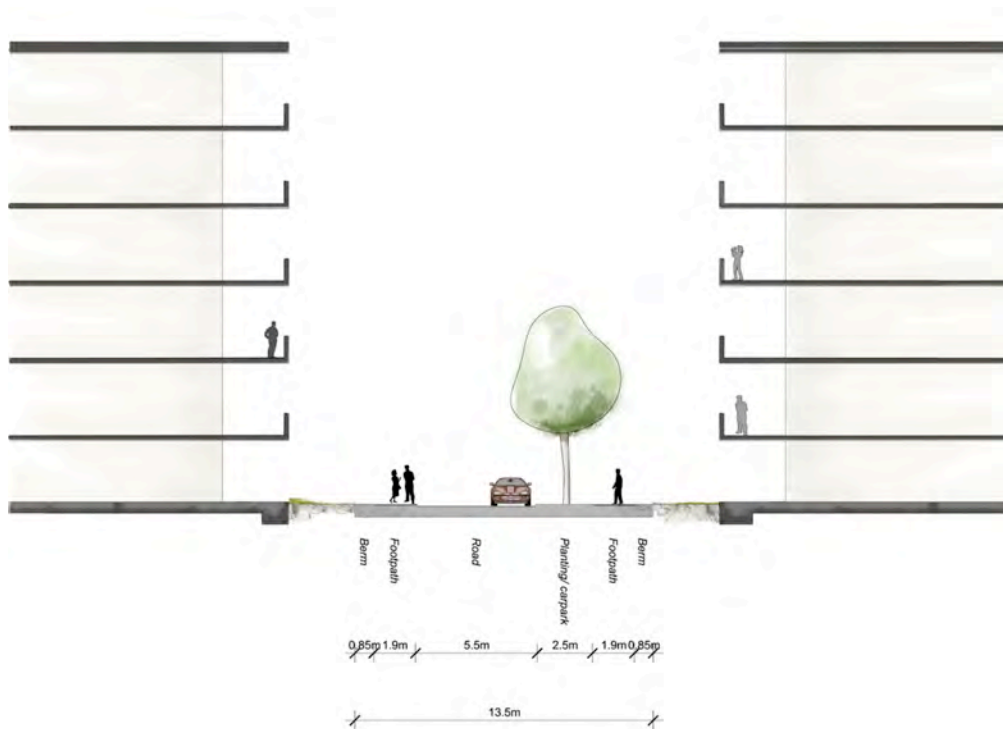
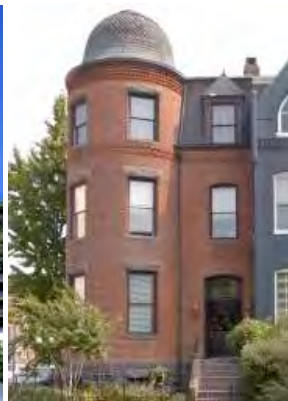


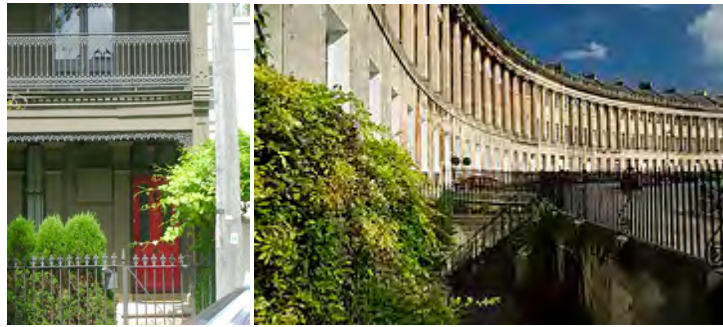
Figure 3: Indicative Street Section – all other streets (13.5m wide)

2.2 Street corners



- (i) Street corners should be given special architectural design treatment so the buildings 'turn the corner' and acknowledge the special spatial condition of the corner.
- (ii) Where a corner is particularly significant in the hierarchy of the street network or where it forms part of a main entry in the Racecourse grounds, or where there is main entry into a building, the corner component of the building form should acknowledge this special condition.
- (iii) The top of buildings at street corners should be designed to distinguish them from the remainder of the building and be an integral component of the corner element.
- (iv) Where practicable, consideration should be given to locating balconies on corners to provide visual interest and reduce the quantum of perceived building mass by providing a 'serrated' profile when viewed against a backdrop of sky, trees or other buildings.
- (v) Corner balconies can provide a useful device for utilizing potentially difficult to inhabit street-edging space created where streets intersect at an angle of greater than or less than 90 degrees.

2.3 Public/semi-public and private space transition



- (i) To avoid 'privatising' adjoining streets and/or publicly accessible open spaces, particular attention should be paid to the residential building design at or near ground level.
- (ii) All street edges should be designed to provide a transition between public, semi-public and private space, while at the same time providing an interesting and attractive street edge for pedestrians.
- (iii) A combination of fencing, landscape treatment and level changes should be used to provide privacy and security for the occupants while at the same time providing a streetscape high in amenity.
- (iv) The street boundary should be defined by either one or a combination of the following techniques:
 - High quality permeable fencing in the form of galvanized or painted steel and/or wrought iron, or powder-coated aluminium railings with a minimum transparency of 70%, to a maximum height of 1.2m,
 - Basalt stone or concrete walls or hedges to a maximum individual height of 1.0m, or a vertical combination thereof, to a maximum total height of 1.2m.

2.4 Public/private interface – front yards

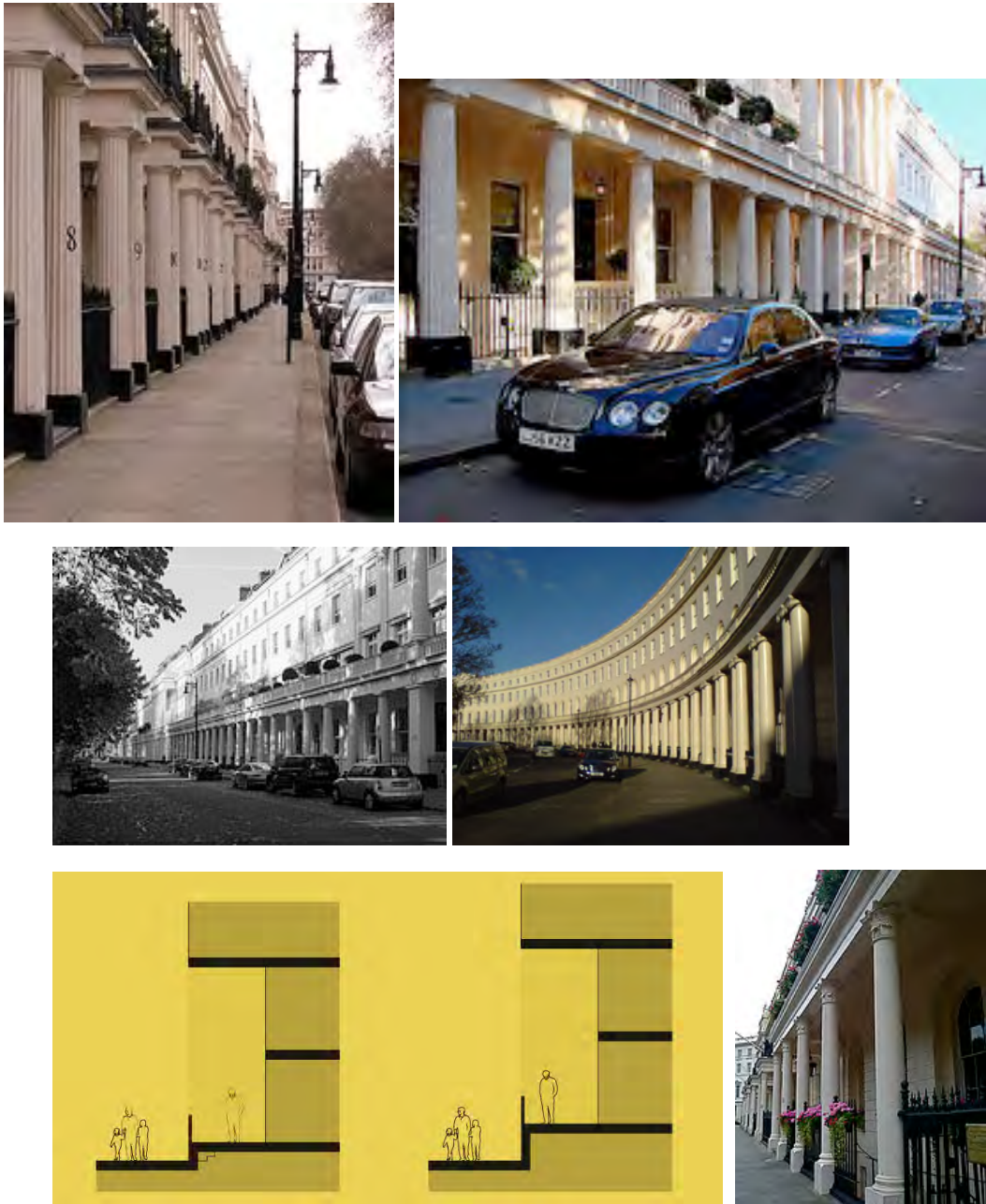


Ground floor apartments on to the street or publicly accessible space

Source: The Good Solutions Guide for Apartments

- (i) Building frontages at ground level should contribute to pedestrian interest and public safety. This will require careful attention to the design of the public-private interface, a variety of architectural detail and maximizing the number of doors, windows and balconies facing the streets and other publicly accessible spaces.
- (ii) Apartments at ground level should have a street address and a front door directly accessible from the street.
- (iii) Front yards should be visible from the eye level of a typical pedestrian walking along the adjoining footpath.
- (iv) Any fencing or planting within a front yard should have a maximum height of 1.2m and fencing should have a transparency of 70%.

2.5 Public/private interface - loggias



Ground floor apartments on to the street or publicly accessible space

Source: The Good Solutions Guide for Apartments

- (i) Loggias are a highly satisfactory and attractive traditional means to achieve a good transition from public to private space in the case buildings constructed right up to a street boundary.
- (ii) Where loggias are deployed they should be well proportioned and of a minimum height of 4.0m when measured from floor to ceiling.

2.6 Public/private interface - steps



Ground floor apartments are here raised above street level and ventilation grilles for basement car parking are well integrated with the street edge design

Source: The Good Solutions Guide for Apartments

- (i) Where a building achieves privacy for ground level apartments by raising the ground floor level above the adjoining street, the steps providing access to the building should be generous and safe (e.g. have risers of approximately 150mm and goings of approximately 300mm).
- (ii) Balustrade and handrail materials and detailing should be of a high quality.

2.7 Passive surveillance



Source: The Good Solutions Guide for Apartments

- (i) New development should be designed in accordance with best practice Crime Prevention Through Environmental Design (CPTED) principles. Buildings should front all adjacent streets or publicly accessible open space and seek to maximize 'passive surveillance'.
- (ii) To ensure all streets and publicly accessible open spaces are overlooked, all apartment buildings should have a kitchen, dining or living area facing the street or publicly accessible open space.
- (iii) Where practicable, consider providing balconies overlooking streets and publicly accessible spaces.
- (iv) Site and building design should minimize concealed areas.
- (v) Fencing and planting should be designed and located in such a way as to ensure there are clear views of public areas.
- (vi) Guidance on CPTED can be found in Annexure 16 of the Auckland City Council Central Area Plan.

2.8 Landscape design



- (i) The design of the landscape associated with development in the Residential 9a zone should be responsive to and enhance the landscape character of the Ellerslie Racecourse grounds, which is a combination of the curvilinear picturesque and the axially and formally structured.
- (ii) The landscape associated with the publicly accessible realm should be restrained, simple, elegant and formal.
- (iii) The landscape associated with the residents' communal open space, out of the view of the public may, if desired, be more informal and picturesque.
- (iv) Stone, basalt or volcanic stone similar in appearance and detail to the existing stone walls at Ellerslie is encouraged.
- (v) Landscaping should incorporate indigenous vegetation, and/or reference the established planting within the Residential 9a zone or Racecourse environment.

2.9 Lighting



- (i) Careful attention should be paid to the design of the lighting of streets, publicly accessible spaces, buildings, entrances, steps, car parking areas and residents' communal open spaces at night.
- (ii) Reference should be made to Annexure 6 of the Auckland City Council Central Area Plan that outlines Safety Guidelines.

2.10 Ground level and above ground level car parking



Source: The Good Solutions Guide for Apartments



Photographer: Tim Church, Boffa Miskell Limited

- (i) Car parking on the street for residents' visitors and the general public should be limited to no more than one row of cars on each side of the street (see Section 5.1 Figures 3, 4 and 5 on pages 7 and 8).
- (ii) All residents' parking should be on site.
- (iii) Buildings containing car parking facilities at or above ground level should provide a 'sleeve' of apartments or active uses between the car parking areas and the street and/or publicly accessible space frontages.
- (iv) In the event that sleeving is not practicable, all vehicles at or above ground level should be screened from view from public areas by architecturally articulated and modulated screens and planting, using materials of a nature and quality similar to those deployed in associate residential apartment/hotel buildings.
- (v) Unsleeved parking should not form any of the 'required building frontages' indicated on the E11-24 Concept Plan.
- (vi) If parking is provided under a podium, the podium surface should be designed as an attractive communal or publicly accessible open space.

3.0 Building design

This section outlines the building design guidelines that will be used to assess applications for Planned Residential Developments and Retirement Villages within the Residential 9a (Ellerslie Racecourse) zone and, where relevant, discretionary activities.

The focus of this section is on the desired design and character of buildings and their associated communal and private exterior spaces.

Accommodation should be designed to provide a high standard of amenity with regard to the size, purpose and design.

Plans submitted for consideration by Council, either as part of a resource consent application or before, should include scaled floor plans at each level showing:

- (i) The living arrangement and room configuration within each residential or accommodation unit, including furniture drawn to the same scale as the floor plans. This is required to illustrate the livability of the spaces provided but does not necessarily mean that, once constructed, rooms must be laid out as indicated.
- (ii) The proposed methods and flow paths of natural cross ventilation.

3.1 Building form



- (i) Buildings should be generally simple in form, relying on elegant proportioning, façade composition and detail for their aesthetic appeal rather than complex forms.
- (ii) Elevations facing streets and other publicly accessible spaces should be restrained, dignified, relatively formal and timeless, befitting the ‘formal’ and somewhat ‘grand’ character of the Ellerslie Racecourse grounds and gardens.
- (iii) Elevations facing communal open space, and generally out of sight of the publicly accessible spaces, may be more informal and relaxed in character.



3.2 Base, middle and top



- (i) Irrespective of their particular architectural design treatment or ‘style’ the composition of building elevations should generally exhibit a *base* (connecting with the ground), a *middle*, and a *top* (terminating the vertical dimension of the building and connecting with the sky).
- (ii) Roofs should be designed as part of the overall building form and contribute to the architectural quality of the skyline when viewed from ground level. They should also appear attractive when viewed from higher buildings nearby. Careful design attention should be paid to the integration or enclosure of plant, exhaust and intake units and other mechanical and electrical equipment into the overall rooftop design so that the individual elements are not visible from outside the site.

3.3 Proportions



- (i) Building elevations should, overall, exhibit predominantly vertical proportions and rhythms. This will assist in producing in the building elevation a sense of repose, poise, and elegance, befitting the envisioned Ellerslie Racecourse park-like residential character.

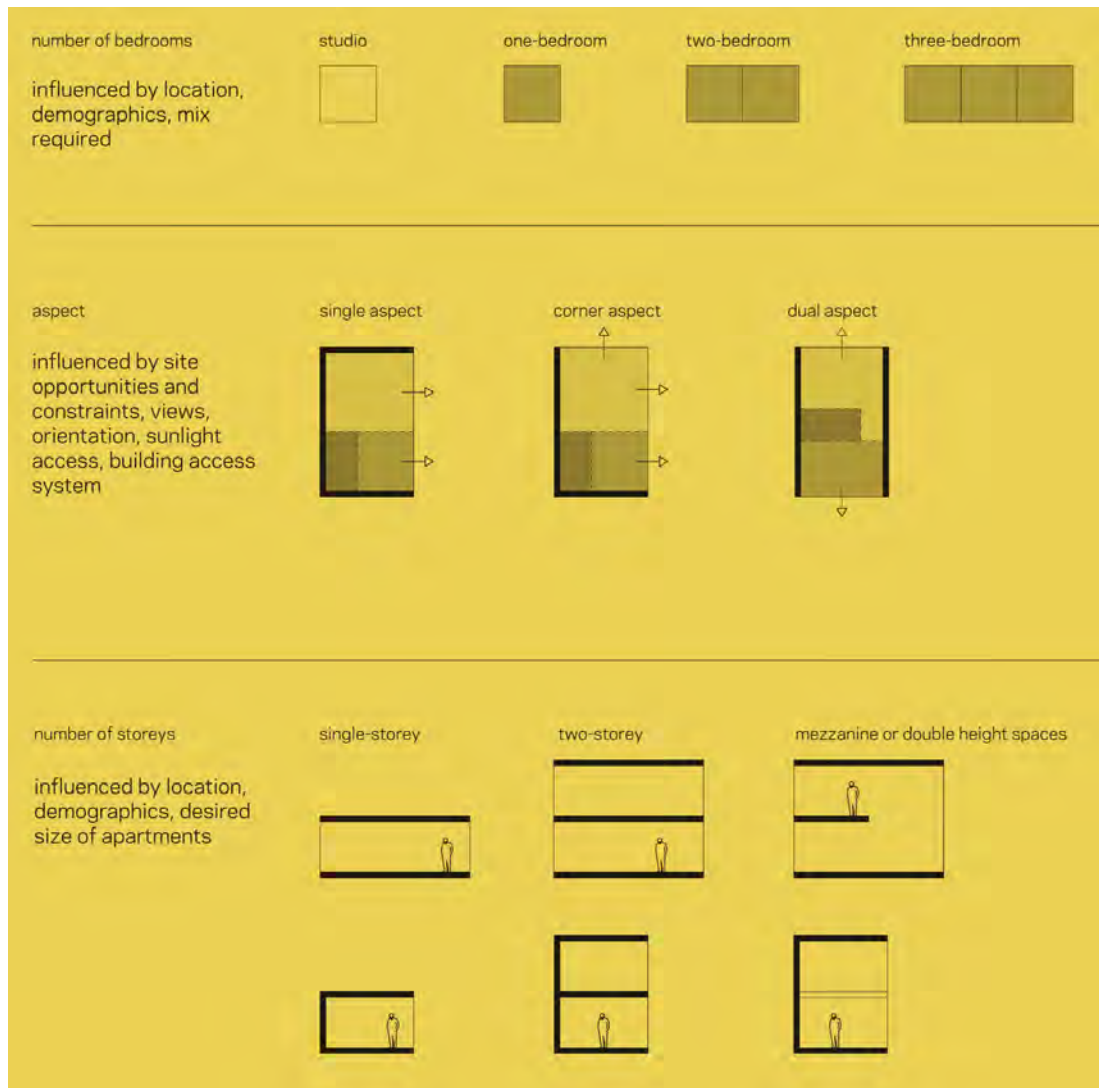
3.4 Architectural articulation and modulation



- (i) Building elevations should exhibit ‘architectural articulation and modulation’ by deploying a variety of techniques, including but not limited to variation in stud heights on different levels (with the tallest at the first floor and a progressive reduction in height as levels ascend up the building), variation in window types (such as bay windows), balconies (projecting and recessed) cornices, dentils, parapets, and roof tops.
- (ii) As a general principle, the articulation and modulation of elevations facing streets and publicly accessible spaces should be relatively restrained in comparison to elevations facing communal open space and areas out of public view.

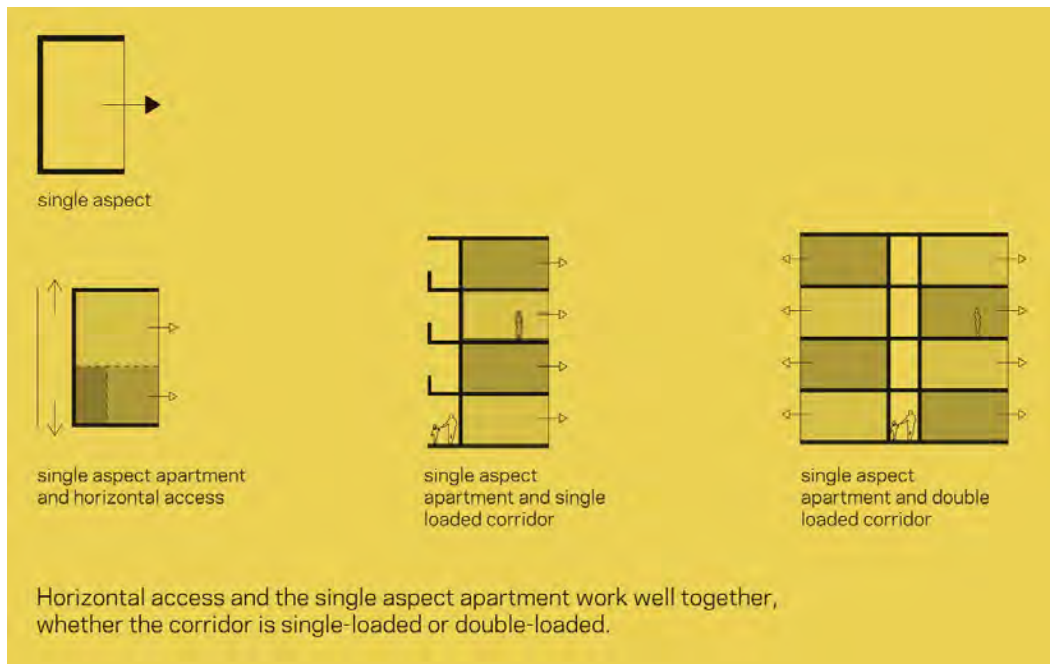
3.5 Apartment typologies, layouts and mix

This section contains examples of the main types of apartment, what are considered to be high quality residential apartment floor plans, and an example of a desirable mix of apartment types. These illustrations have been extracted from the *Good Solutions Guide for Apartments*, produced jointly by the North Shore City Council and the Auckland City Council.



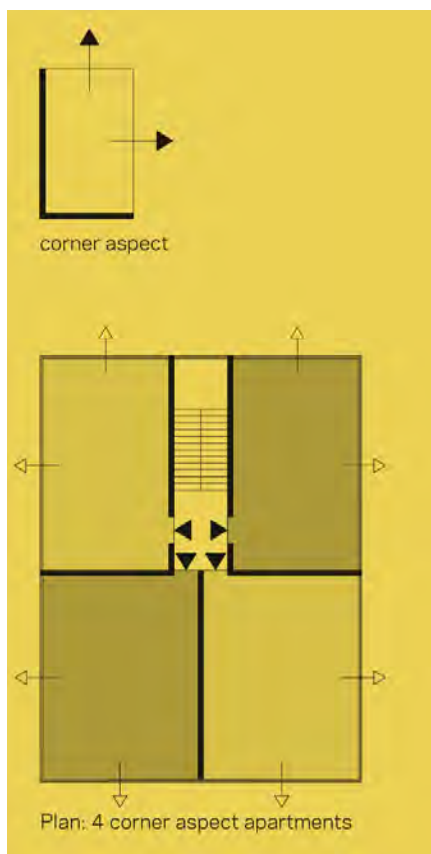
Apartment Typologies: Classification of Apartments

Source: The Good Solutions Guide for Apartments



Single Aspect Apartments

Source: The Good Solutions Guide for Apartments

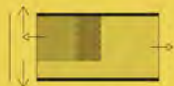


Corner Aspect Apartments

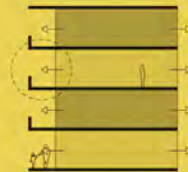
Source: The Good Solutions Guide for Apartments



Dual Aspect with Horizontal Access Issues



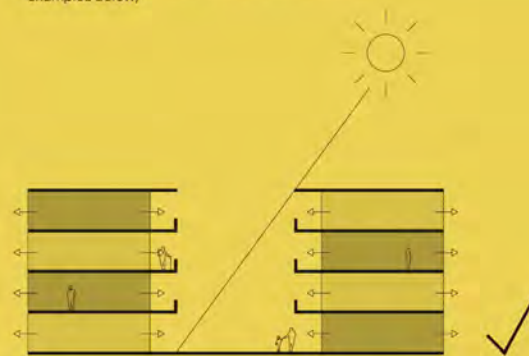
1. dual aspect apartment and horizontal access



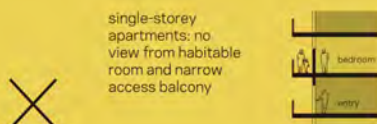
2. extra care is needed to provide an adequate level of amenity - natural light, natural ventilation, privacy - to a habitable room facing onto access balcony (see examples below)



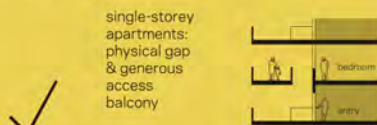
3. dual aspect apartments are not compatible with double loaded corridors, or any variation thereof



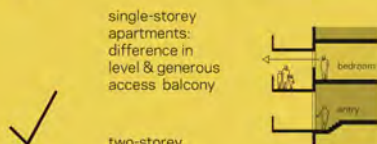
4. there should be enough separation/open space between two opposing blocks of dual aspect apartments to allow direct sunlight to enter habitable rooms on the ground floor



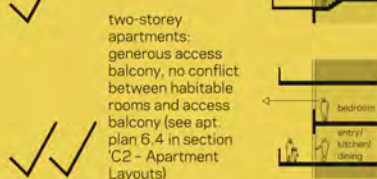
single-storey apartments: no view from habitable room and narrow access balcony



single-storey apartments: physical gap & generous access balcony



single-storey apartments: difference in level & generous access balcony



two-storey apartments: generous access balcony, no conflict between habitable rooms and access balcony (see apt. plan 6.4 in section 'C2 - Apartment Layouts')

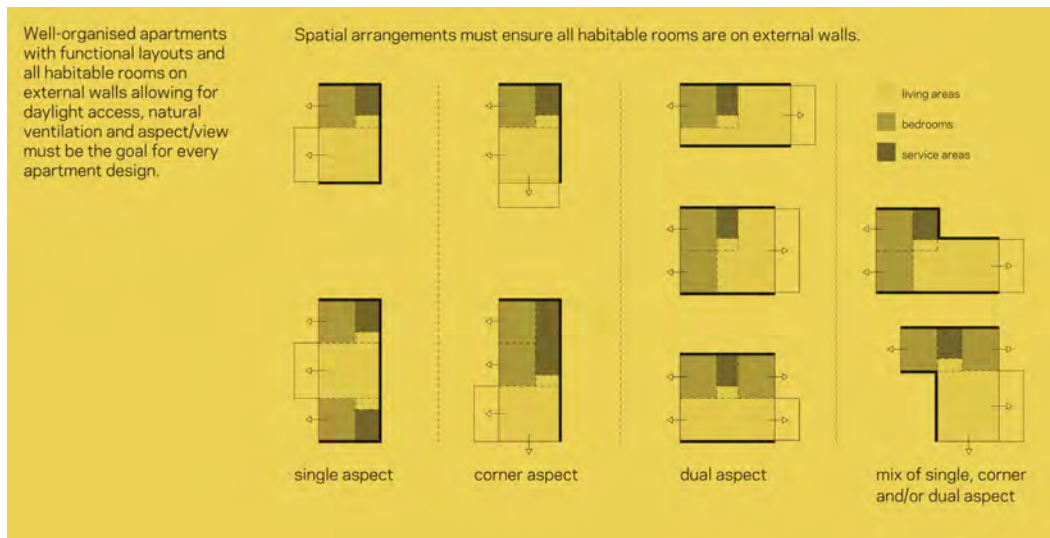
Examples for improving the amenity value of both the access balcony and the habitable room/bedroom

Horizontal access paired with dual aspect apartments is less satisfactory due to a habitable room, usually a bedroom, looking out onto the access balcony. Extra care and effort is necessary at the design stage to ensure an adequate level of amenity for both the habitable room and the circulation running past.

With double loaded corridors, the combination is impossible as the habitable room facing onto the corridor becomes internal. Disconnection of the corridor from the dual aspect apartments to provide a clear void between them is not a desirable solution (fig. 3) and should be avoided; adequate daylight access and a reasonable outlook cannot be achieved in the habitable room.

Dual Aspect Apartments

Source: The Good Solutions Guide for Apartments



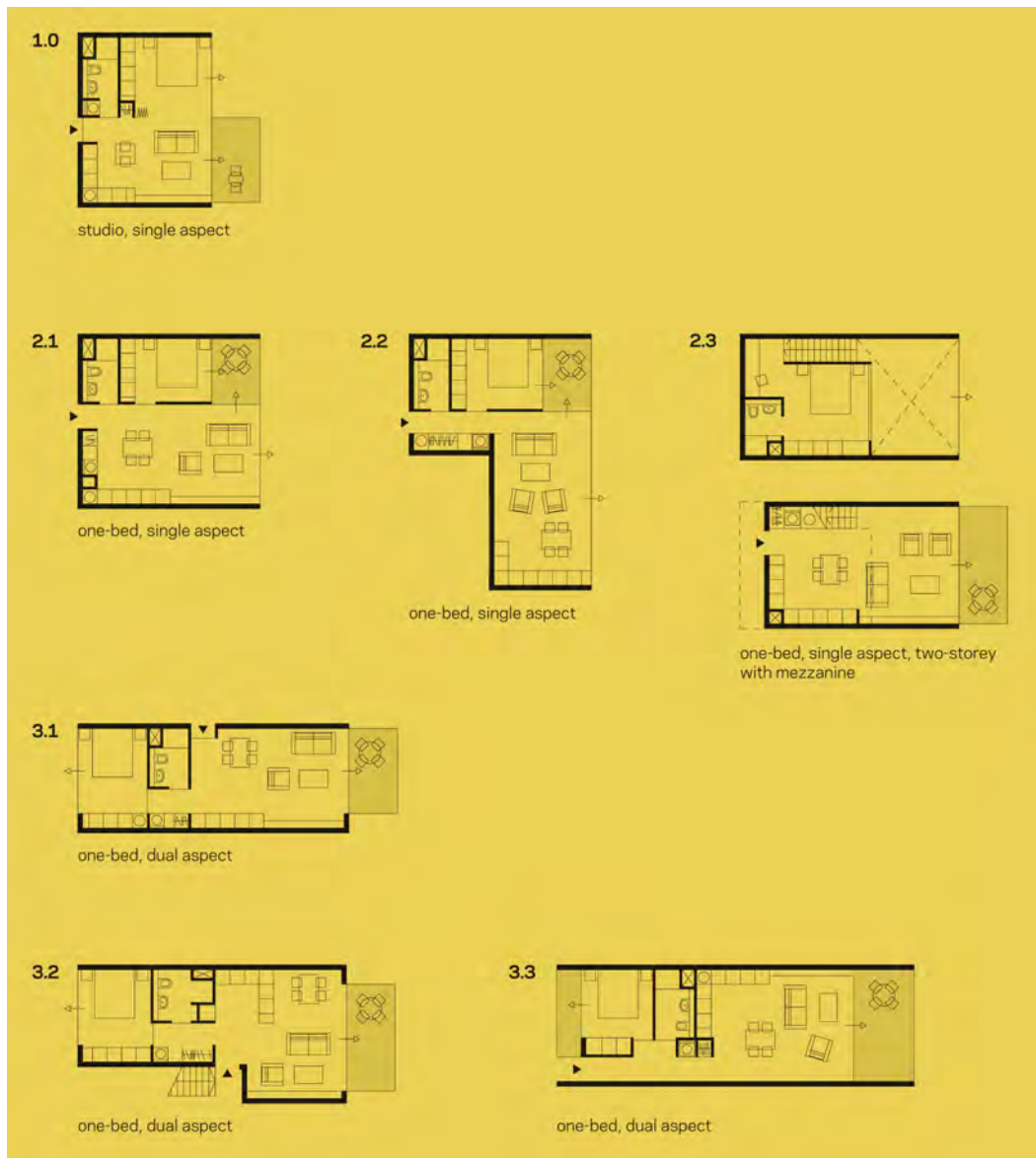
Apartment Layout

Source: The Good Solutions Guide for Apartments



Apartment Layout: Furniture

Source: The Good Solutions Guide for Apartments



Apartment Layout: Examples

Source: The Good Solutions Guide for Apartments



Apartment Layout: Examples

Source: The Good Solutions Guide for Apartments



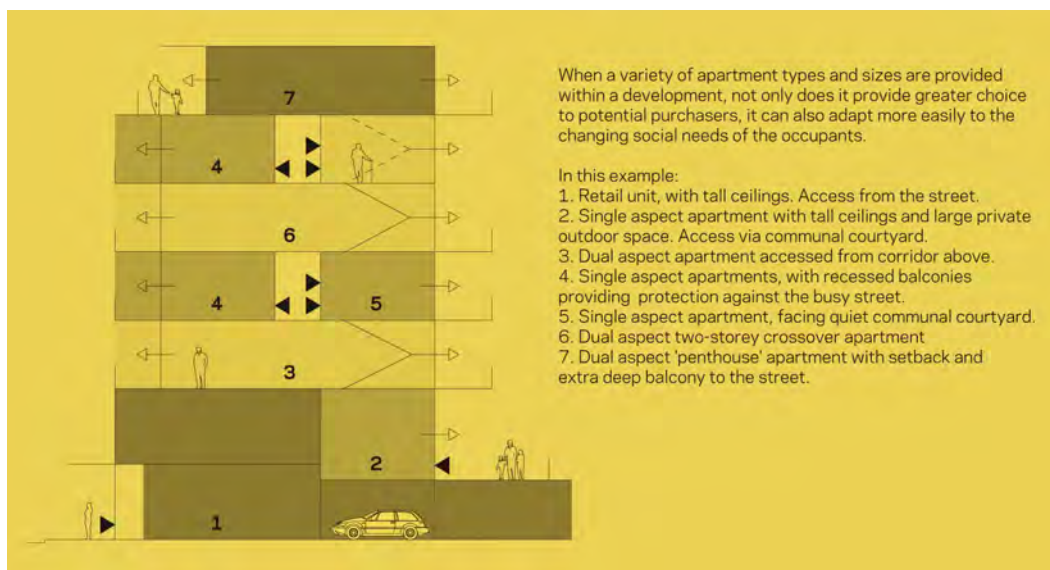
Apartment Layout: Examples

Source: The Good Solutions Guide for Apartments



Apartment Layout: Examples

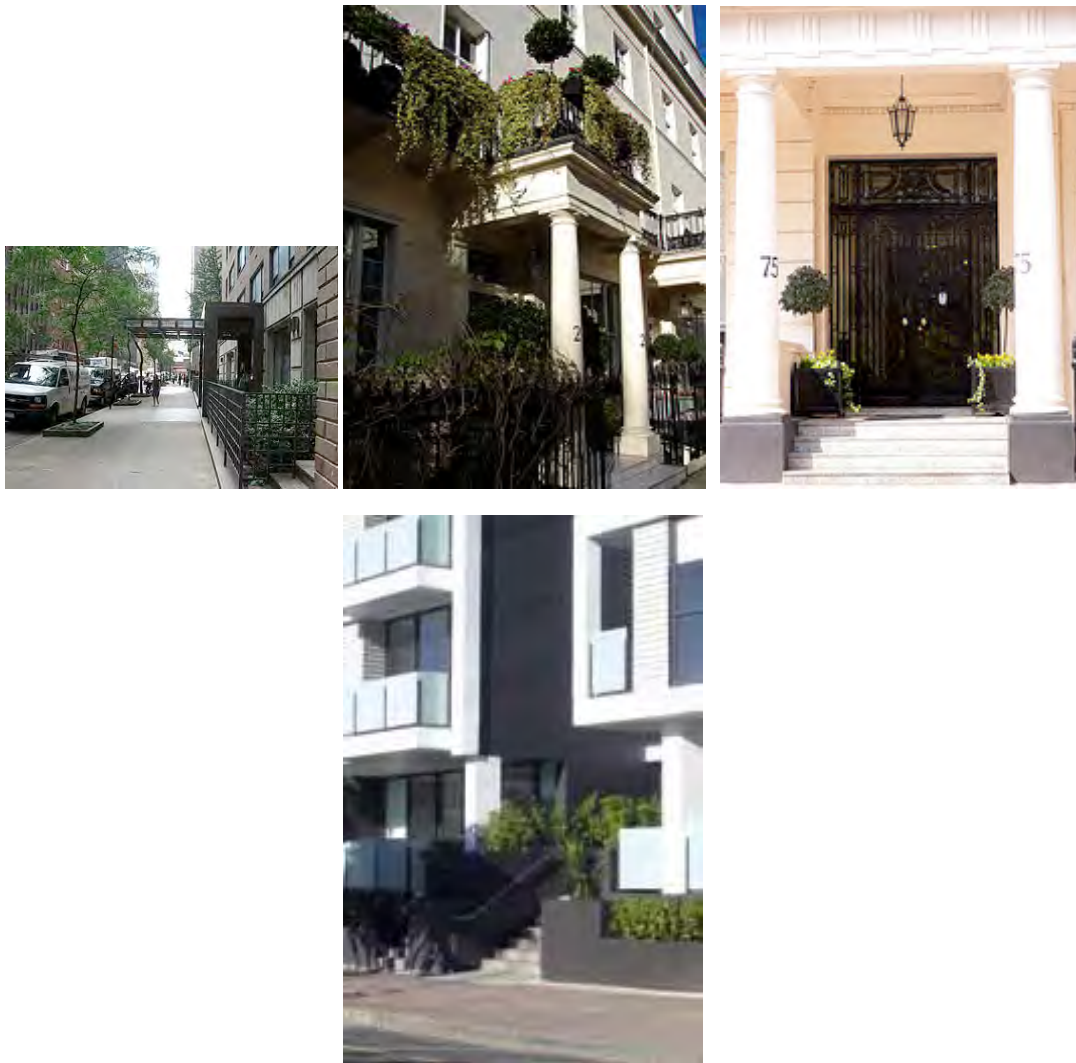
Source: The Good Solutions Guide for Apartments



Apartment Mix

Source: The Good Solutions Guide for Apartments

3.6 Entrances



Source: The Good Solutions Guide for Apartments

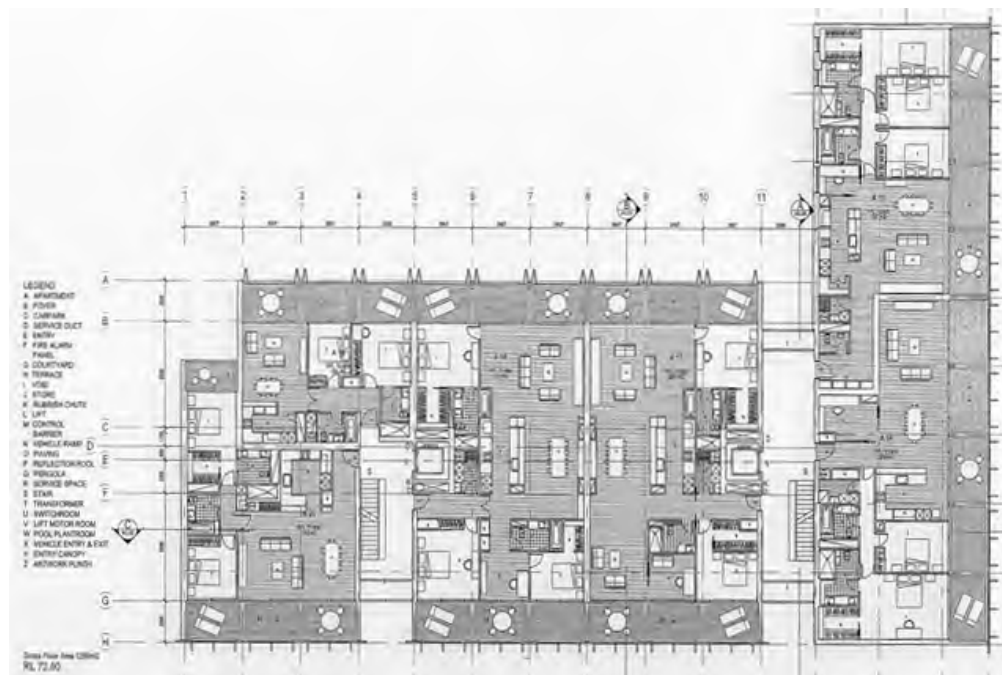
- (i) Building entrances should be visible and easily identifiable from the street and directly accessible from street level.
- (ii) Building entrances should provide pedestrian shelter.
- (iii) Apartments at street level should have a street address and a front door directly accessible from the street.
- (iv) For mixed use developments in Area A, separate pedestrian entrances should be provided for residential activities (mixed uses are not permitted in Areas B and C).
- (v) Mailboxes should be easily accessible for mail delivery from the exterior of the building, and secure and conveniently accessible to residents from within the foyer, without obstructing access to lifts, stairs, or impeding general circulation.

3.7 Vertical access



Source: Good Solutions Guide for Apartments

- (i) Where practicable, consideration should be given to expressing vertical circulation cores on at least one exterior face of the building. This provides natural light within and outlook from the foyers and reduces energy consumption. Foyers so located also provide casual surveillance of the street and assist in varying the façade and reducing the scale of a long building.
- (ii) Stairs should be easily accessible and inviting, to encourage residents to use stairs in preference to lifts. This promotes healthy exercise and assists sustainability.
- (iii) A mix of single, corner and dual aspect apartments on a single floor would promote a diversity of plans and avoid long corridors.

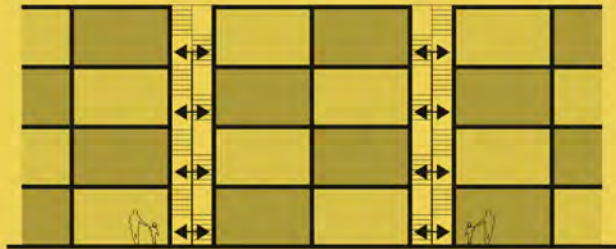


Plan of Trinity apartments, designed by Architectus – a mixture of single and dual aspect floor plans.

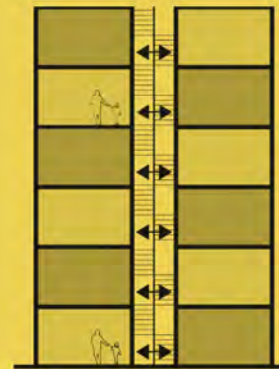
A vertical access arrangement can consist of a single vertical circulation core or multiple vertical circulation cores.

a. Slab block with multiple circulation cores, below.

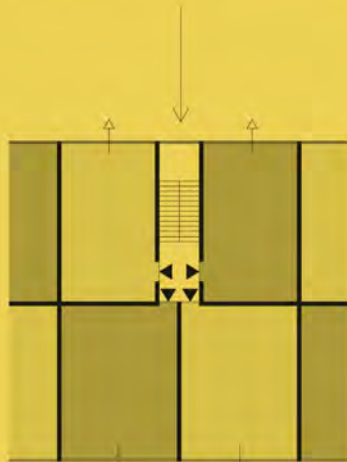
b. Point block with a single circulation core, right.



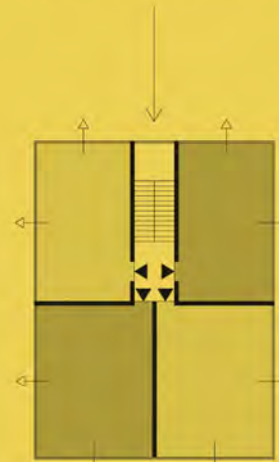
1a. Elevation: Vertical Access



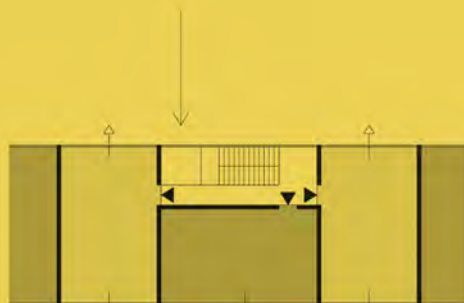
1b. Elevation: Vertical Access



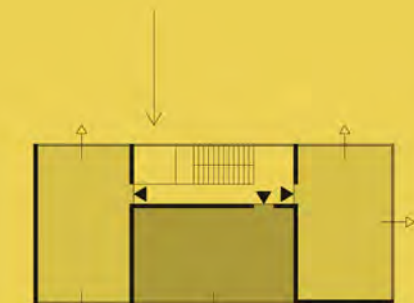
2a. Plan: single aspect apartments



2b. Plan: corner aspect apartments



3a. Plan: a mix of single aspect and dual aspect apartments can be used on each floor



3b. Plan: a mix of single aspect, dual aspect and corner aspect apartments can be used on each floor

Vertical Access

Source: The Good Solutions Guide for Apartments



1 single and 2 triple aspect 2 bedroom apartments

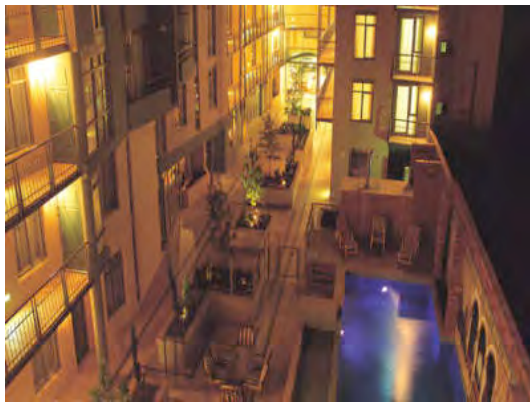
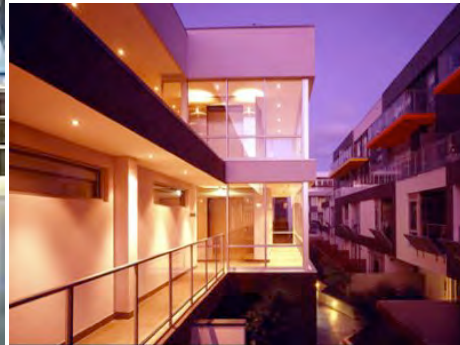


2 triple aspect 3 bedroom apartments (could be adapted to 2 dual aspect 3 bedroom apartments and repeated end on end)



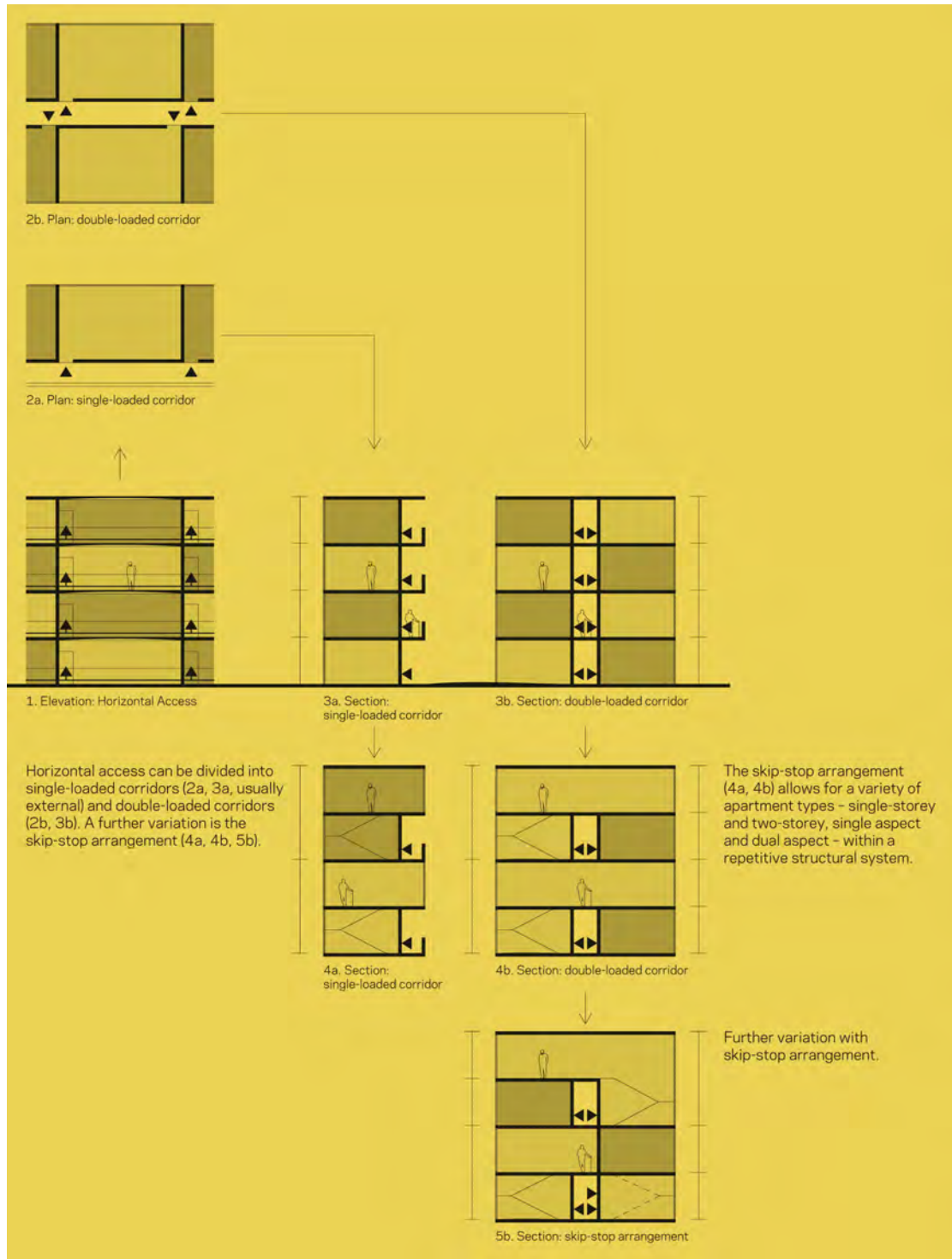
A mixture of single, corner and dual aspect apartments of varying sizes.

3.8 Horizontal access



- (i) Where horizontal access is unavoidable, it should preferably be based upon a single loaded corridor or a skip-stop corridor.² Double loaded internal corridors make cross ventilation of apartments difficult and the corridors themselves require artificial lighting and ventilation.
- (ii) If a double loaded corridor cannot be avoided, the corridor should be oriented north-south so that there are no solely south facing apartments.
- (iii) Access corridors should be short, wide and have windows at each end to provide natural light and ventilation.
- (iv) Exterior horizontal access should be designed to provide visual and acoustic privacy for apartment rooms adjacent to the access space. This can be achieved with extra wide access balconies or by pulling the balcony away for the exterior face of the apartment and providing 'bridges' to the entry doors.

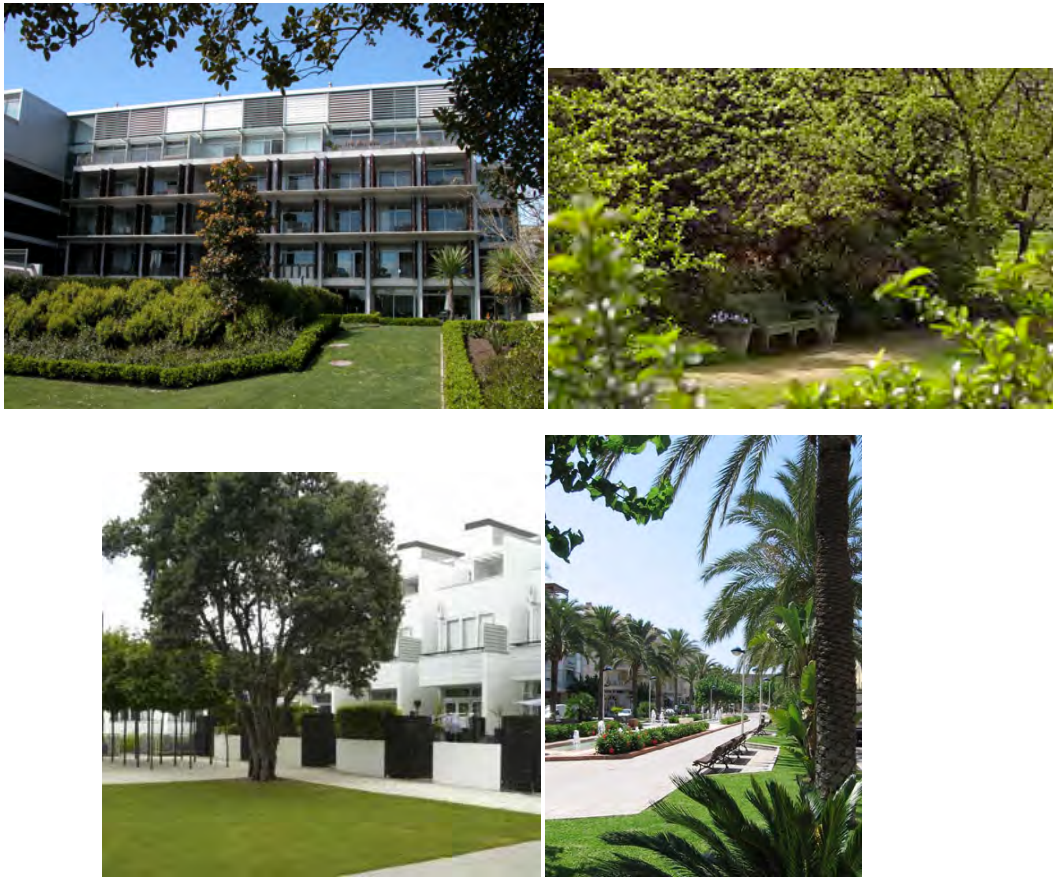
² Skip-stop refers to a building that has a double loaded corridor on every second level so that every other level has a dual aspect apartment. Because the corridor does not occur at every level, the lift skips a floor – hence the term 'skip-stop'.



Horizontal Access

Source: The Good Solutions Guide to Apartments

3.9 Communal outdoor space



Source: The Good Solutions Guide for Apartments



Ground floor apartments onto communal outdoor space

Source: The Good Solutions Guide for Apartments

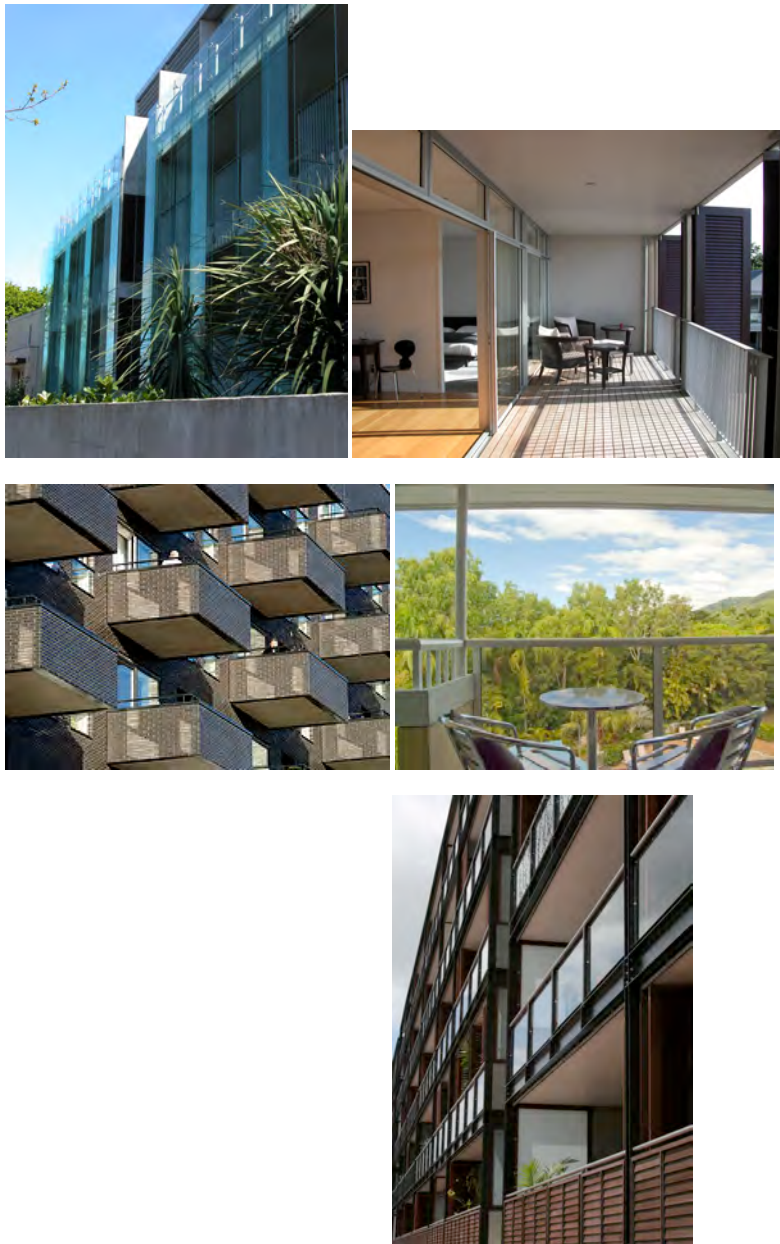
- (i) External space within the residential apartment developments should provide a combination of high quality ground courtyards for ground level apartments and communal passive recreational space for residents.
- (ii) Where communal space is located on top of basement car parking, provision should be made for trees to be able to grow to their mature height and remain healthy.
- (iii) High retaining walls should be avoided where possible. Any walls higher than 1m should be stepped and incorporate planting.
- (iv) The landscape should incorporate indigenous vegetation, and/or draw upon the established planting within the Residential 9a zone or the Racecourse environment.

3.10 Private outdoor space - courtyards



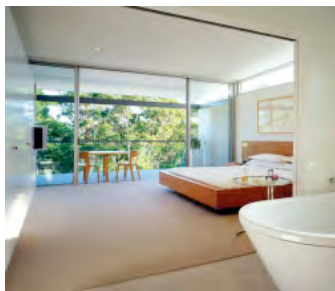
- (i) Apartments at ground level or on the roof of a basement car park should be provided with a private courtyard for outdoor living.
- (ii) The courtyard should have a minimum area of 27m², a minimum horizontal dimension of 4.5m, and be directly accessible from the principal living space.
- (iii) The walls of courtyards facing the street or publicly accessible spaces should not exceed 1.2m in height. For rear courtyards or those edging communal open space, walls should not exceed facing 1.8m in height.
- (iv) A hose tap should be provided in each apartment's principal outdoor living courtyard.

3.11 Private outdoor space – balconies



- (i) Apartments above ground level should be provided with a private balcony directly accessible from the principal living area.
- (ii) For one and two bedroom apartments, the balcony should have a minimum area of 6m², with a minimum horizontal dimension of 2m.
- (iii) For apartments with three or more bedrooms, the balcony should have a minimum area of 9m², with a minimum horizontal dimension of 2.4m.
- (iv) Balconies that are private, sheltered and can be used all year round are encouraged.
- (v) Balconies that are fully recessed within the overall building form are to be preferred over those that project fully beyond the face of the building. These provide better weather protection and façade articulation.
- (vi) A hose tap should be provided on each apartment's principal balcony.

3.12 Outlook and visual privacy



- (i) Internal design of every accommodation unit within a development should maximize outlook, as distinct from views.
- (ii) Outlook over the Racecourse and infield should be maximized.
- (iii) Outlook over existing adjoining residential property should be minimized.
- (iv) All outlook space should be designed to achieve a high level of amenity through design and landscaping.
- (v) Outlook space should be provided either over a street, publicly accessible space, pedestrian link, the racetrack, or into the landscaped centre of a development block.
- (vi) Where two apartments face each other, their minimum separation distance should be 15 metres.

3.13 Acoustic privacy

- (i) Apartments should be arranged to minimize noise transmission between apartments. Means of achieving this (in addition to compliance with the relevant New Zealand Building Codes for sound transmission) include:
- a) placing living rooms adjacent to living rooms, bedrooms adjacent to bedrooms, and service rooms adjacent to service rooms, both horizontally and vertically.
 - b) Utilizing storage or circulation zones to contain noise within the apartment and to buffer noise from adjoining mechanical services or corridors and lobby areas.
 - c) Minimizing the number of inter-tenancy (shared) walls between apartments.



Acoustic privacy

Source: The Good Solutions Guide for Apartments

3.14 Basement car parking



Source: The Good Solutions Guide for Apartments

- (i) Basement or covered parking for residents is strongly encouraged.
- (ii) No access to basement parking should be provided off private roads, private lanes, private ways or publicly accessible space adjacent to the edge of the racetrack.
- (iii) The number of basement access and service interruptions to building frontage and footpath continuity, and the width of such interruptions, should be minimized.
- (iv) The entrance to basement parking facilities should be attractive and not compromise the safety of pedestrians and cyclists.
- (v) Partial basement parking structures should not project more than 1.2m above the adjoining street level and should be designed to provide a visually attractive edge to the adjoining footpath, street and/or publicly accessible space.
- (vi) There should be direct lift and stair access from basement car parking areas to the individual apartment lobbies.
- (vii) Security of access to and egress from basement parking should be carefully considered and provided for.
- (viii) Fumes from parking structures or other uses should not be ventilated or discharged into adjacent pedestrian environments.
- (ix) A storage locker for each apartment in basement or covered car parks, large enough to contain an adult's bicycle, is a desirable feature.

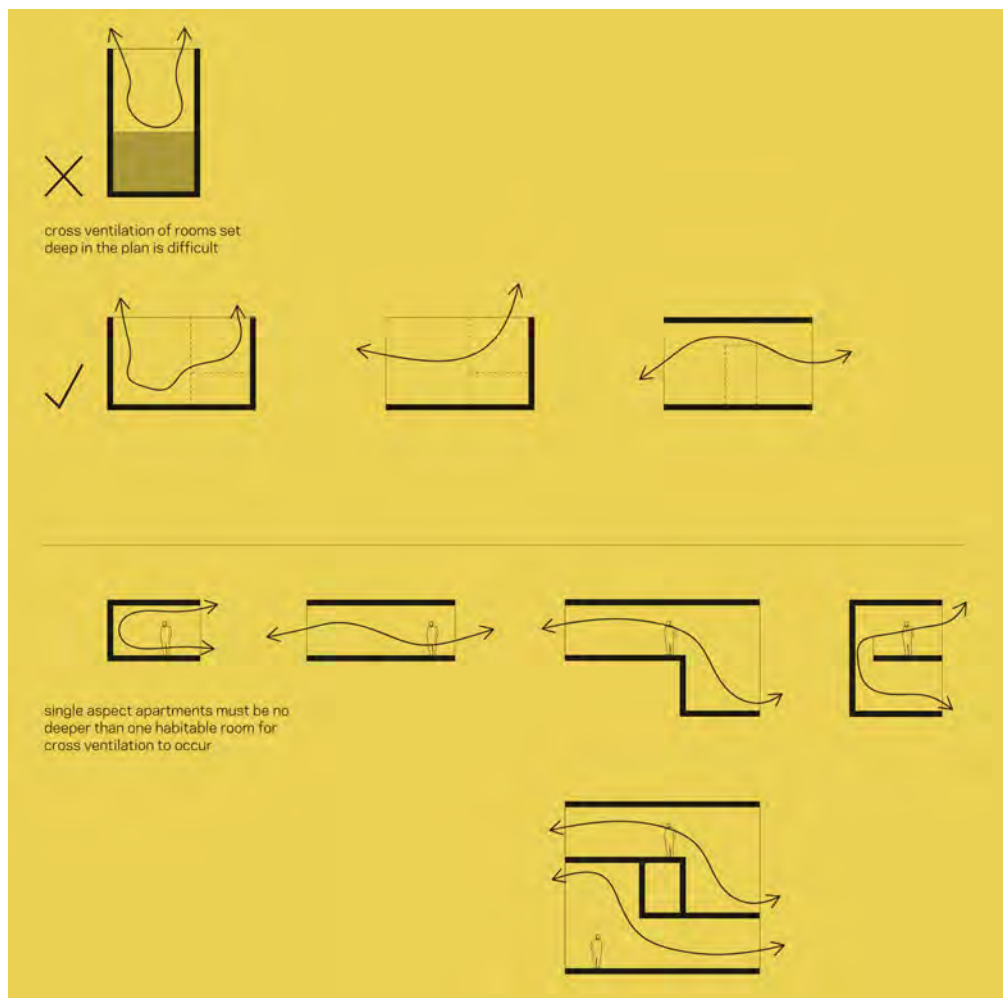
3.15 Materials



- (i) Materials on the exterior of buildings should be high quality, durable and easily maintained, particularly at ground and first floor levels.
- (ii) Side or rear walls should be used as an opportunity to introduce creative architectural design solutions that provide interest in the façade including architectural modulation, surface relief and/or detailing.

3.16 Natural ventilation

- (i) All accommodation should be provided with natural cross ventilation by, preferably, having window opening facing different directions. Dual aspect and corner apartments are best able to provide such window openings, but *shallow depth* single aspect apartment can be naturally ventilated in a satisfactory manner.
- (ii) Notwithstanding any requirements to achieve internal acoustic privacy, ventilation provided solely by mechanical means is discouraged.
- (iii) As apartments are often uninhabited during the daytime, ventilation elements should be secure and rainproof when left open.

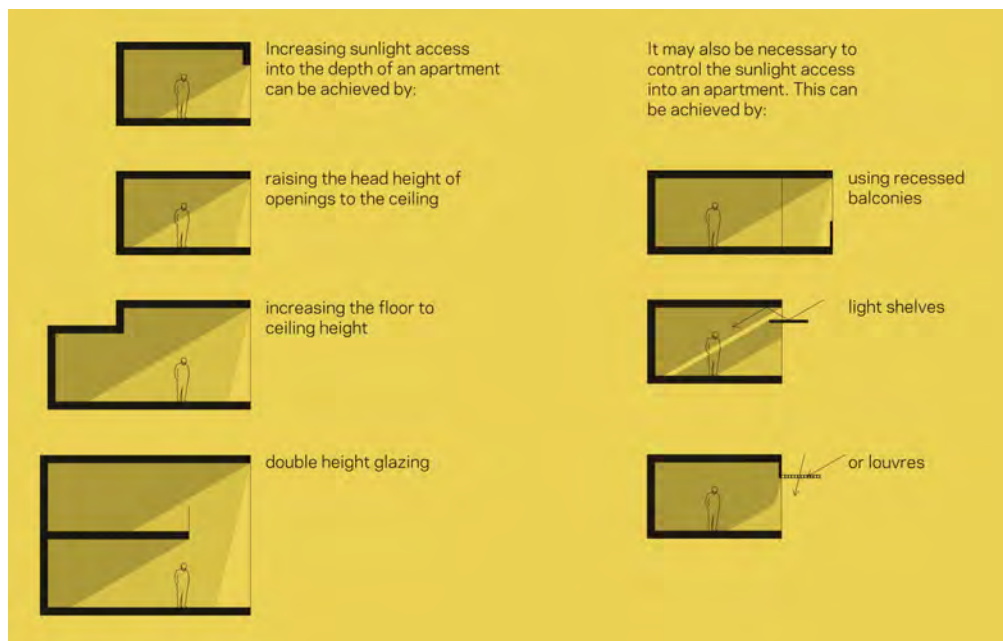


Natural ventilation

Source: The Good Solutions Guide for Apartments

3.17 Daylight access

- (i) In order to reduce reliance on artificial light and reduce energy consumption, daylight access to apartments should be maximized.
- (ii) The site layout should orientate buildings to optimize the northerly aspect.
- (iii) Sunlight access from the north, east and west should be able to be controlled by residents to prevent buildings becoming too hot.
- (iv) The depth of single aspect apartments should be minimized.
- (v) Single aspect apartments with a southerly aspect should be avoided, and where this is not possible the percentage of southerly aspect apartments (south-west through south-east) should not exceed 10% of the total number of apartments in the building.
- (vi) At least 70% of living rooms and private open spaces in any development should receive a minimum of three hours of sunlight between 9.00am and 3pm in mid-winter.



Daylight Access

Source: The Good Solutions Guide for Apartments

3.18 Sustainability

- (i) Buildings should be designed to be sustainable through the use of durable, low maintenance materials, inert exterior cladding, maximizing solar access and natural ventilation and through the incorporation of mechanical and electrical systems that optimize energy efficiency.
- (ii) Adequate storage space and containers should be provided for rubbish and recyclable material, in a location that is convenient and easily accessible to occupants and collection vehicles.
- (iii) Where practicable, development should incorporate on-site storm water conservation measures, or other low-impact storm water systems.

4.0 Glossary of terms

address the street – means the building should orient its front face generally parallel and close to the street boundary, and have its main entrance directly visible and accessible from that same street.

apartment typologies – means the study, interpretation, classification and description of apartments according to the range of different types, which may be defined by building form, aspect, access, number of storeys or number of bedrooms, etc.

architectural articulation – means to make clearly distinguishable the junctions between architectural components of a building and/or building elevation.

architectural modulation – means to regulate, adjust or vary the vertical and/or horizontal emphases, proportions and rhythms created by the components of a building and/or building elevation.

passive surveillance – means people casually observing (rather than formally or deliberately watching) what is going on a street, park or publicly accessible space outside the building they are occupying.

physically edge – means to provide a built/constructed edge.

positively engage – means to visually and functionally interact with in a positive and aesthetically harmonious manner.

seamless – means continuous, without visible joints or junctions.

sleeve of apartments – means, by analogy with a shirt 'sleeve' wrapped around an arm, a zone of apartments wrapped around the outer edges of an area of car parking so as to ensure that the parking is not visible on the outside of a building.

spatially define – means to given definition to a space in such a way that the space becomes tangible and is able to be perceived as a 'volume' with finite limits.