

## Part 1 – Local Context

Relevant Section	Objectives	Proposed Development
Building Height	<ul style="list-style-type: none"> <li>To ensure future development responds to the desired scale and character of the street and local area.</li> <li>To allow reasonable daylight access to all developments and the public domain.</li> <li>Additional drawings should be provided illustrating the difference in overshadowing (if any) between the shadow cast by the agreed building envelope and the scheme currently proposed.</li> </ul>	<ul style="list-style-type: none"> <li>The development has been designed so that the heights of the three blocks address the neighbouring property and or streetscape to create a contextual outcome</li> <li>All three blocks are lowest in height adjacent to the low scale residential development on the south east boundary</li> <li>The height is greatest at the centre of the middle block where the impact is least</li> <li>Daylight access is achieved for 3 hours in mid winter to the open space and northern facing windows of the adjacent dwellings</li> </ul>
Building Depth	<ul style="list-style-type: none"> <li>To ensure that the bulk of the development is in scale with the existing or desired future context.</li> <li>To provide adequate amenity for building occupants in terms of sun access and natural ventilation.</li> <li>To provide for dual aspect apartments</li> </ul>	<ul style="list-style-type: none"> <li>The bulk of the development has been designed to relate specifically to this site and has considered the development zoning for site on the opposite side of Epping Road</li> <li>The building depth provides adequate amenity to the occupants as all units will have cross ventilation and at least 70% of units will have 3 hours of sun access in mid winter to living space and private open space</li> <li>Approximately two thirds of dwellings have dual aspect apartments</li> </ul>
Building Separation	<ul style="list-style-type: none"> <li>To ensure that new development is scaled to support the desired area character with appropriate massing and spaces between buildings</li> <li>To provide visual and acoustic privacy for existing and new residents</li> <li>To control overshadowing of adjacent properties and private or shared open space</li> <li>To allow for the provision of open space with appropriate size and proportion for recreational activities for building occupants</li> <li>To provide deep soil zones for stormwater management and tree planting, where contextual and site conditions allow</li> </ul>	<ul style="list-style-type: none"> <li>The development carefully considered the massing of the built form in respect to the locality, surrounding street and adjacent buildings</li> <li>The space between the buildings has ensured that communal open space has enough sunlight for the growth of significant trees in selected locations</li> <li>Large communal open spaces eg the bio-retention parks and the community gardens are located in areas that achieve maximum sunlight with no overshadowing</li> <li>Deep soil zones have been provided to all edges of the development</li> <li>The visual and acoustic privacy of new and existing residents has been accommodated</li> </ul>
Street Setbacks	<ul style="list-style-type: none"> <li>To establish the desired spatial proportions of the street and define the street edge.</li> <li>To create a clear threshold by providing a transition between public and private space.</li> <li>To assist in achieving visual privacy to apartments from the street.</li> <li>To create good quality entry spaces to lobbies, foyers or individual dwelling entrances.</li> <li>To allow an outlook to and surveillance of the street. To allow for street landscape character.</li> </ul>	<ul style="list-style-type: none"> <li>The street setbacks of all three streets have been considered in respect to each particular street character</li> <li>The Epping and Lane Cove Road address reflects the harsh nature of the 6 to 8 lane RTA roads. The street edge is defined by a 1.5m gabion wall. This wall is located within the boundary providing a wider public domain. This has allowed for street trees to be provided on either side of the pedestrian footpath</li> <li>The building on Epping Road is setback along the south east at a similar distance to the adjacent property, the setback increases to a maximum setback of some 29m. This creates considerable distance between the buildings and the Epping Road overpass</li> <li>The building form is one block which relates to the development scale on</li> </ul>

		<p>the opposite side of Epping Road and the robust nature of the street. The building is broken down via a stepping form both in plan and elevation</p> <ul style="list-style-type: none"> <li>▪ The Lane Cove Road building address relates to the residential nature of the street as two blocks of a similar width as the adjacent properties are present to Epping Road</li> <li>▪ The Allengrove Crescent address is different in nature, the boundary walls are at a height of approximately 1m and reflects the residential nature of the street</li> <li>▪ There are a number of entry points (4) on Allengrove Crescent reflective of the residential environment. This allows for the three street blocks to have their own street address</li> <li>▪ The unit plans have been designed for living spaces to overlook Epping and Allengrove Road providing street surveillance</li> <li>▪ The visual privacy to the apartments will be achieved through the use of screens and shutters overlooking the public streets</li> <li>▪ The entries at all three street boundaries are clearly defined with the use of splayed walls bringing the pedestrian into the development</li> <li>▪ The gated entries with canopies will clearly define the public and private space</li> </ul>
Side and Rear Setbacks	<p>Side Setbacks:</p> <ul style="list-style-type: none"> <li>▪ To minimise the impact of development on light, air, sun, privacy, views and outlook for neighbouring properties, including future buildings.</li> <li>▪ To retain or create a rhythm or pattern of development that positively defines the streetscape so that space is not just what is left over around the building form.</li> </ul> <p>Rear Setbacks:</p> <ul style="list-style-type: none"> <li>▪ To maintain deep soil zones to maximise natural site drainage and protect the water table.</li> <li>▪ To maximise the opportunity to retain and reinforce mature vegetation.</li> <li>▪ To optimise the use of land at the rear and surveillance of the street at the front.</li> <li>▪ To maximise building separation to provide visual and acoustic privacy.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The side setbacks to the south east boundary have been maximised to provide amenity to the neighbouring dwellings</li> <li>▪ The built form on the south east boundary is minimised as the ends of the three blocks face this boundary allowing for maximum views, light and air to the adjacent residences</li> <li>▪ The buildings along the north east boundary front either the street or the communal spaces therefore there will not be any overlooking issues onto these neighbouring properties</li> <li>▪ There are no rear setbacks</li> </ul>
Floor Space Ratio	<ul style="list-style-type: none"> <li>▪ To ensure that development is in keeping with the optimum capacity of the site and the local area.</li> <li>▪ To define allowable development density for generic building types.</li> <li>▪ To provide opportunities for modulation and depth of external walls within the allowable FSR.</li> <li>▪ To promote thin cross-section buildings, which maximise daylight access and natural ventilation.</li> <li>▪ To allow generous habitable balconies.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The site represents a unique opportunity to provide the residential targets in the Macquarie Rail Corridor</li> <li>▪ The size of the site has created the ability to produce a denser fabric of built form close to the rail corridor</li> <li>▪ The unit layouts have been designed so that closer to two thirds of the units have dual aspect, with all units having cross ventilation</li> <li>▪ The balconies are generous and at a minimum are 2m in length</li> </ul>

Part 2- Site Design		
Relevant Section	Objectives	Proposed Development
Deep Soil Zones	<ul style="list-style-type: none"> <li>To assist with management of the water table.</li> <li>To assist with management of water quality.</li> <li>To improve the amenity of developments through the retention and/or planting of large and medium size trees.</li> </ul>	<ul style="list-style-type: none"> <li>The development has deep soil zones along all boundary perimeters thus assisting the water quality and water table</li> <li>The development retains one significant Eucalyptus along the north east boundary and has been designed to be sympathetic to the trees in the public reserve, providing adequate setbacks for the tree protection zones</li> <li>Approximately 40% of the open space on the site is deep soil</li> </ul>
	<p><b>Rule of Thumb</b></p> <ul style="list-style-type: none"> <li>A minimum of 25 percent of the open space area of a site should be a deep soil zone; more is desirable. Exceptions may be made in urban area where sites are built out and there is no capacity for water infiltration. In these instances, stormwater treatment measures must be integrated with the design of the residential flat building. (See Stormwater Management)</li> </ul>	
Fences and Walls	<ul style="list-style-type: none"> <li>To define the edges between public and private land.</li> <li>To define the boundaries between areas within the development having different functions or owners.</li> <li>To provide privacy and security.</li> <li>To contribute positively to the public domain.</li> </ul>	<ul style="list-style-type: none"> <li>The fences and walls on the site have considered the public domain and clearly define the public and private domain</li> <li>The walls at Epping and Lane Cove Road are proposed to be approximately 1.5m in height providing a strong buffer to the harsh external environment</li> <li>The walls at Allengrove Crescent relate to the residential nature of the street and are proposed to be low height sandstone</li> </ul>
Landscape Design	<ul style="list-style-type: none"> <li>To add value to residents' quality of life within the development in the forms of privacy, outlook and views.</li> <li>To provide habitat for native indigenous plants and animals.</li> <li>To improve stormwater quality and reduce quantity.</li> <li>To improve the microclimate and solar performance within the development.</li> <li>To improve urban air quality.</li> <li>To contribute to biodiversity.</li> </ul>	<ul style="list-style-type: none"> <li>The landscape design within the development provides a green buffer to the proposed development to assist in integrating the buildings into the urban fabric</li> <li>Privacy is obtained through the use of walls, fences, screens and planting</li> <li>ESD principles have been adhered to in terms of stormwater strategy, low water use plants and porous paving materials</li> </ul>
Open Space	<ul style="list-style-type: none"> <li>To provide residents with passive and active recreational opportunities.</li> <li>To provide an area on site that enables soft landscaping and deep soil planting.</li> <li>To ensure that communal open space is consolidated, configured and designed to be useable and attractive.</li> <li>To provide a pleasant outlook.</li> </ul>	<ul style="list-style-type: none"> <li>The open space provided achieves the minimum 30% communal open space</li> <li>The communal open spaces created are varied and provide a range of uses eg recreational childrens park, bio retention park and community gardens. These spaces are also broken up through the use of levels and design to enable groups to congregate into more personable areas</li> <li>The communal open spaces are made up of areas with deep soil planting zones and soft landscaping above a podium level</li> <li>The private open space for each apartment at ground level has a minimum dimension of at least 4m</li> </ul>
	<p><b>Rules of Thumb</b></p> <ul style="list-style-type: none"> <li>The area of communal open space required should generally be at</li> </ul>	

	<p>least between 25 and 30 percent of the site area. Larger sites and brownfield site may have potential for more than 30 percent.</p> <ul style="list-style-type: none"> <li>Where developments are unable to achieve the recommended communal open space, such as those in dense urban areas, they must demonstrate that residential amenity is provided in the form of increased private open space and/or in contribution to public open space.</li> <li>The minimum recommended area of private open space for each apartment at ground level or dimension in one direction is 4 metres. (See Balconies for other private open space requirements).</li> </ul>	
Orientation	<ul style="list-style-type: none"> <li>To optimise solar access to residential apartments within the development and adjacent development.</li> <li>To contribute positively to desired streetscape character.</li> <li>To support landscape design of consolidated open space areas.</li> <li>To protect the amenity of existing development.</li> <li>To improve the thermal efficiency of new buildings.</li> </ul>	<ul style="list-style-type: none"> <li>All the residential blocks have a north east aspect with at least 70% of the dwellings achieving 3 hours of sunlight in mid winter</li> <li>All adjacent residences obtain a minimum of 3 hours of sunlight in mid winter to northern windows and private open spaces</li> <li>The orientation of the open spaces allows for direct sunlight all year round to areas to the north east and north west.</li> <li>Landscape areas within the development provide sun in mid winter for growth of trees and plants</li> </ul>
Planting on Structures	<ul style="list-style-type: none"> <li>To contribute to the quality and amenity of communal open space on roof tops, podiums and internal courtyards.</li> <li>To encourage the establishment and healthy growth of trees in urban areas.</li> </ul> <p><b>Rules of Thumb</b></p> <ul style="list-style-type: none"> <li>In terms of soil provision there is no minimum standard that can be applied to all situation as the requirements vary with the size of plants and trees at maturity. The following are recommended as minimum standards for a range of plant sizes;</li> <li>Large trees such as figs (canopy diameter of up to 16 metres at maturity) <ul style="list-style-type: none"> <li>minimum soil volume 150 cubic metres</li> <li>minimum soil depth 1.3 metres</li> <li>minimum soil area 10 metre x 10 metre area or equivalent</li> </ul> </li> <li>Medium trees (8 metre canopy diameter at maturity) <ul style="list-style-type: none"> <li>minimum soil volume 35 cubic metres</li> <li>minimum soil depth 1 metre</li> <li>approximate soil area 6 metres x 6 metres or equivalent</li> </ul> </li> <li>Small trees (4 metre canopy diameter at maturity) <ul style="list-style-type: none"> <li>minimum soil volume 9 cubic metres</li> <li>minimum soil depth 800mm</li> <li>approximate soil area 3.5 metres x 3.5 metres or equivalent</li> </ul> </li> <li>Shrubs <ul style="list-style-type: none"> <li>minimum soil depths 500-600mm</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The minimum standards for soil depth and volume over the podium will be achieved</li> <li>Adequate planting will be provided over the podium to communal open spaces to encourage tree growth</li> </ul>

	<ul style="list-style-type: none"> <li>▪ Ground cover <ul style="list-style-type: none"> <li>- minimum soil depths 300-450mm</li> <li>- minimum soil depths 100-300mm</li> <li>- any subsurface drainage requirements are in addition to the minimum soil depths quoted above</li> </ul> </li> </ul>	
Storm Water Management	<ul style="list-style-type: none"> <li>▪ To minimise the impacts of residential flat development and associate infrastructure on the health and amenity of natural water ways.</li> <li>▪ To preserve existing topographic and natural features including water courses and wetland.</li> <li>▪ To minimises the discharge of sediment and other pollutants to the urban storm water drainage system during construction activity.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The stormwater runoff generated on the site will be controlled with OSD tanks thus ensuring no impact to receiving water bodies of impacts to Councils existing stormwater infrastructure</li> <li>▪ Water quality will be managed with implementation of water sensitive urban design and will achieve the pollutant reduction targets</li> </ul>
Safety	<ul style="list-style-type: none"> <li>▪ To ensure residential flat developments are safe and secure for residents and visitors.</li> <li>▪ To contribute to the safety of the public domain.</li> </ul> <p><b>Rule of Thumb</b></p> <ul style="list-style-type: none"> <li>▪ Carry out a formal crime risk assessment for all residential developments of more than 20 new dwellings.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The public and private domain will be clearly identifiable</li> <li>▪ The development will be well lit, with excellent passive surveillance to the communal areas and streets</li> <li>▪ Small foyers are designed minimising the number of people using them and negating the security risk of long corridors and dead spaces</li> <li>▪ Formal crime risk assessment will be undertaken</li> </ul>
Visual Privacy	<ul style="list-style-type: none"> <li>▪ To provide reasonable levels of visual privacy externally and internally, during the day and at night.</li> <li>▪ To maximise outlook and views from principal rooms and private open space without compromising visual privacy.</li> </ul> <p><b>Rule of Thumb</b></p> <ul style="list-style-type: none"> <li>▪ Refer to Building Separation minimum standards.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The building separation of all but one block will be 24m-30m</li> <li>▪ The two blocks closest to Lane Cove Road will be 12-17m apart.</li> <li>▪ All buildings will have shutters to enable the resident to control the level of privacy desired</li> </ul>
Building Entry	<ul style="list-style-type: none"> <li>▪ To create entrances which provide a desirable residential identity for the development</li> <li>▪ To orient the visitor.</li> <li>▪ To contribute positively to the streetscape and building facade design.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The entries at all three street boundaries are clearly defined with the use of splayed walls bringing the pedestrian into the development</li> <li>▪ The gated entries with canopies will clearly define the public and private space</li> </ul>
Parking	<ul style="list-style-type: none"> <li>▪ To minimise car dependency for commuting and recreational transport use and to promote alternative means of transport-public transport, bicycling, and walking.</li> <li>▪ To provide adequate car parking for building's users and visitors, depending on building type and proximity to public transport.</li> <li>▪ To integrate the location and design of car parking with the design of the site and the building.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The development provides the minimum number of car spaces, both residential and visitor numbers are based on reduced parking rates as the development falls within 400m of Epping Road which encourages the use of public transport</li> <li>▪ The location of the carpark underground does not negatively impact the design</li> <li>▪ Car sharing facilities will also be provided</li> </ul>
Pedestrian Access	<ul style="list-style-type: none"> <li>▪ To promote residential flat development that is well connected to the street and contributes to the accessibility of the public domain.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The development is well connected to the public domain with 4 entry points from the three street addresses</li> </ul>

	<ul style="list-style-type: none"> <li>To ensure that residents, including users of strollers and wheelchairs are people with bicycles, are able to reach and enter their apartment and use communal areas via minimum grade ramps, paths, access ways or lifts.</li> </ul>	<ul style="list-style-type: none"> <li>The landform through the site has a change in level up to 3m, therefore whilst wheelchair access to the main communal area and majority of the units is provided it was not possible throughout the development</li> </ul>
Vehicular Access	<ul style="list-style-type: none"> <li>To integrate adequate car parking and servicing access without compromising street character, landscape or pedestrian amenity and safety.</li> <li>To encourage the active use of street frontages.</li> </ul>	<ul style="list-style-type: none"> <li>The vehicular access into the development is from Allengrove Crescent, access via the other RTA roads would be unacceptable</li> <li>The vehicular access is divided up into residential access (into the basement carpark) and service access (for services and emergency vehicles)</li> <li>The driveway width for the residential access will be a maximum of 6m</li> </ul>
	<p><b>Rule of Thumb</b></p> <ul style="list-style-type: none"> <li>Generally limit the width of driveways to a maximum of six metres.</li> <li>Locate vehicle entries away from main pedestrian entries on secondary frontages.</li> </ul>	

### Part 3- Building Design

Apartment Layout	<ul style="list-style-type: none"> <li>To ensure the spatial arrangement of apartments is functional and well organised.</li> <li>To ensure that apartment layouts provide high standards of residential amenity-</li> <li>To maximise the environmental performance of apartments.</li> <li>To accommodate a variety of household activities and occupants' needs.</li> </ul>	<ul style="list-style-type: none"> <li>The apartment layout is a simple design that allows for ease of servicing and build ability</li> <li>The layouts provide a high standard of residential amenity</li> <li>Single aspect apartments are at a maximum 8metres from a window</li> <li>The kitchen windows are no more than 8metres from a window</li> <li>The minimum apartments sizes will be accommodated</li> </ul>
	<p><b>Rule of Thumb</b></p> <ul style="list-style-type: none"> <li>Single-aspect apartments should be limited in depth to 8 metres from a window.</li> <li>The back of a kitchen should be no more than 8 metres from a window.</li> <li>The width of cross-over or cross-through apartments over 15 metres deep should be 4 metres or greater to avoid deep narrow apartments layouts.</li> <li>Buildings not meeting the minimum standards listed above, must demonstrate how satisfactory daylighting and natural ventilation can be achieved, particularly in relation to habitable rooms (see Daylight Access and Natural Ventilation).</li> <li>If council chooses to standardise apartment sizes, a range of sizes that do not exclude affordable housing should be used. As a guide, the Affordable Housing Service suggest the following minimum apartment sizes, which can contribute to housing affordability; (apartment size is only one factor influencing affordability) <ul style="list-style-type: none"> <li>1 bedroom apartment 50m<sup>2</sup></li> <li>2 bedroom apartment 70m<sup>2</sup></li> <li>3 bedroom apartment 95m<sup>2</sup></li> </ul> </li> </ul>	

Apartment Mix	<ul style="list-style-type: none"> <li>▪ To provide a diversity of apartments types, which cater for different household requirements now and in the future.</li> <li>▪ To maintain equitable access to new housing by cultural and socio-economic groups.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The apartment mix will cater for different household requirements</li> </ul>
Balconies	<ul style="list-style-type: none"> <li>▪ To provide all apartments with private open space.</li> <li>▪ To ensure balconies are functional and responsive to the environment thereby promoting the enjoyment of outdoor living for apartment residents.</li> <li>▪ To ensure that balconies are integrated into the overall architectural form and detail of residential flat buildings.</li> <li>▪ To contribute to the safety and liveliness of the street by allowing for casual overlooking and address.</li> </ul> <p><b>Rule of Thumb</b></p> <ul style="list-style-type: none"> <li>▪ Provide primary balconies for all apartments with a minimum depth of 2 metres. Developments which seek to vary from the minimum standards must demonstrate that negative impacts from the context-noise, wind-can not be satisfactorily mitigated with design solutions.</li> <li>▪ Require scale plans of balcony with furniture layout to confirm adequate, useable space when an alternate balcony depth is proposed.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Balconies will be provided to all units above ground</li> <li>▪ The balconies are minimum 2m deep and overlook the street and communal spaces contributing to the safety and liveliness of these spaces</li> </ul>
Ceilings Heights	<ul style="list-style-type: none"> <li>▪ To increase the sense of space in apartments and provide well proportioned rooms.</li> <li>▪ To promote the penetration of daylight into the depths of the apartment-</li> <li>▪ To contribute to flexibility of use.</li> <li>▪ To achieve quality interior spaces while considering the extreme building form requirements.</li> <li>▪ To encourage housing designs, which meet the broadest range of the occupant's needs possible.</li> <li>▪ To promote 'long life loose fit' buildings, which can accommodate whole or partial changes of use.</li> <li>▪ To encourage adaptive re-use.</li> <li>▪ To save the embodied energy expended in building demolition.</li> </ul> <p><b>Rule of Thumb</b></p> <ul style="list-style-type: none"> <li>▪ The following recommended dimensions are measured from finished floor level (FDL) to finished ceiling level (FCL). These are minimums only and do not preclude higher ceilings, if desired. <ul style="list-style-type: none"> <li>- In mixed use buildings: 3.3 metre minimum for ground floor retail or commercial and for first floor residential, retail or commercial to promote future flexibility of use</li> <li>- In residential flat buildings in mixed use areas: 3.3 metre minimum for ground floor to promote future flexibility of use</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ The apartments will have well-proportioned rooms with dual aspect to majority of the units, allowing for maximised daylight</li> <li>▪ 2.7metre minimum ceiling heights for habitable rooms and 2.4m minimum for non habitable rooms can be achieved</li> </ul>

	<ul style="list-style-type: none"> <li>- In residential flat buildings or other residential floors in mixed use buildings:</li> <li>- In general, 2.7 metre minimum for all habitable rooms on all floors, 2.4 metres is the preferred minimum for all non-habitable rooms, however 2.25m is permitted.</li> <li>- For two storey units, 2.4 metre minimum for second storey if 50 percent or more of the apartment has 2.7 metre minimum ceiling heights</li> <li>- For two-storey units with a two storey void space, 2.4 metre minimum ceiling heights</li> <li>- Attic spaces, 1.5 metre minimum wall height at edge of room with a 30 degree minimum ceiling slope.</li> </ul> <ul style="list-style-type: none"> <li>▪ Developments which seek to vary the recommended ceiling heights must demonstrate that apartments will receive satisfactory daylight (eg. Shallow apartments with large amount of window area).</li> </ul>	
Flexibility	<ul style="list-style-type: none"> <li>▪ To contribute to the desired streetscape of an area and to create active safe streets.</li> <li>▪ To increase the housing and lifestyle choices available in apartment buildings.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The development increases the housing and lifestyle choices in apartment buildings</li> </ul>
Ground Floor Apartments	<ul style="list-style-type: none"> <li>▪ To contribute to the desired streetscape of an area and to create active safe streets.</li> <li>▪ To increase the housing and lifestyle choices available in apartment buildings.</li> </ul> <p><b>Rule of Thumb</b></p> <ul style="list-style-type: none"> <li>▪ Optimise the number of ground floor apartments with separate entries and consider requiring an appropriate percentage of accessible unity. This relates to the desired streetscape and topography of the site.</li> <li>▪ Provide ground floor apartments with access to private open space, preferably as a terrace or garden.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The ground floor units to Allengrove Crescent have three individual entries for the one block. This relates to the streetscape and topography of the site</li> <li>▪ The ground floor units on Epping Road are accessed via one entry point which is suitable considering the harsh urban environment at street level</li> </ul>
Internal Circulation	<ul style="list-style-type: none"> <li>▪ To create safe and pleasant spaces for the circulation of people and their personal possessions.</li> <li>▪ To facilitate quality apartment layouts, such as dual aspect apartments.</li> <li>▪ To contribute positively to the form and articulation of the building facade and its relationship to the urban environment.</li> <li>▪ To encourage interaction and recognition between residents to contribute to a sense of community and improve perceptions of safety.</li> </ul> <p><b>Rules of Thumb</b></p> <ul style="list-style-type: none"> <li>▪ In general, where units are arranged off a double-loaded corridor, the number of units accessible from a single core/corridor should be</li> </ul>	<ul style="list-style-type: none"> <li>▪ The foyers serve 3 to 4 units per floor creating small foyer spaces that minimise the number of people using them and negates the security risk of long corridors and dead spaces. The design promotes visibility in stairwells and walkways through use of transparent materials such as glass, perforated screens and louvers</li> <li>▪ The small circulation/ foyer space facilitates the majority of apartments with dual aspect layouts</li> </ul>



	<p>limited to eight. Exceptions may be allowed:</p> <ul style="list-style-type: none"> <li>▪ For adaptive reuse buildings</li> <li>▪ Where developments can demonstrate the achievement of the desired streetscape character and entry response</li> <li>▪ Where developments can demonstrate a high level of amenity for common lobbies, corridors and units, (cross over, dual aspect apartments).</li> </ul>	
Mixed Uses	<ul style="list-style-type: none"> <li>▪ To support the integration of appropriate retail and commercial uses with housing.</li> <li>▪ To create more active live streets and urban areas, which encourage pedestrian movement, service the needs of the residents and increase the area's employment base.</li> <li>▪ To ensure that the design of mixed-use developments maintains residential amenities and preserves compatibility between uses.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The site does not lend itself to retail or commercial uses due to its context and street environment</li> </ul>
Storage	<ul style="list-style-type: none"> <li>▪ To provide adequate storage for everyday household items within easy access of the apartment.</li> <li>▪ To provide storage for sporting, leisure, fitness and hobby equipment.</li> </ul> <p><b>Rule of Thumb</b></p> <ul style="list-style-type: none"> <li>▪ In addition to kitchen cupboards and bedroom wardrobes, provide accessible storage facilities at the following rates: <ul style="list-style-type: none"> <li>- Studio apartments 6m<sup>3</sup></li> <li>- One-bedroom apartments 6m<sup>3</sup></li> <li>- Two-bedroom apartments 8m<sup>3</sup></li> <li>- Three plus bedroom apartments 10m<sup>3</sup></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Adequate storage will be provided to each unit, the required areas can be provided</li> </ul>
Acoustic Privacy	<ul style="list-style-type: none"> <li>▪ To ensure high level of amenity by protecting the privacy of residents within residential flat buildings both within the apartment and in private open space</li> </ul>	<ul style="list-style-type: none"> <li>▪ The units will be designed with the required insulation between units and externally to provide a compliant level of amenity</li> </ul>
Daylight Access	<ul style="list-style-type: none"> <li>▪ To ensure that daylight access to all habitable rooms is encouraged in all other areas of residential flat development.</li> <li>▪ To provide adequate ambient lighting and minimises the need for artificial lighting during day light hours.</li> <li>▪ To provide residents with the ability to adjust the quantity of day light to suit their needs.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Living rooms and private open spaces will be provided to a minimum of 70% of units for three hours in mid winter</li> <li>▪ No units have a single southerly aspect</li> </ul>
	<p><b>Rule of Thumb</b></p> <ul style="list-style-type: none"> <li>▪ Living rooms and private open spaces for at least 70 percent of apartments in a development should receive a minimum of three hours direct sunlight between 9 am and 3 pm in mid winter. In dense urban areas a minimum of two hours may be acceptable.</li> <li>▪ Limit the number of single-aspect apartments with a southerly aspect (SW-SE) to a maximum of 10 percent of the total units proposed.</li> </ul>	

	<p>Developments which seek to vary from the minimum standards must demonstrate how site constraints and orientation prohibit the achievement of these standards and show energy efficiency is addressed (see Orientation and Energy Efficiency).</p> <ul style="list-style-type: none"> <li>▪ See Apartment Layout for additional rules of thumb.</li> </ul>	
Natural Ventilation	<ul style="list-style-type: none"> <li>▪ To ensure that apartments are designed to provide all habitable room with direct access to fresh air and to assist in the promoting thermal comfort</li> <li>▪ To provide natural ventilation in non habitable rooms where possible</li> <li>▪ To reduce energy consumptions by minimising the uses of mechanical ventilation, particular air conditioning</li> </ul> <p><b>Rule of Thumb</b></p> <ul style="list-style-type: none"> <li>▪ Building depths, which support natural ventilation typically range from 10 to 18 metres.</li> <li>▪ Sixty percent (60%) of residential units should be naturally crossed ventilated.</li> <li>▪ Twenty five percent (25%) of kitchens within a development should have access to natural ventilation.</li> <li>▪ Developments, which seek to vary from the minimum standards, must demonstrate how natural ventilation can be satisfactorily achieved, particularly in relation to habitable rooms.</li> </ul>	<ul style="list-style-type: none"> <li>▪ All units will have natural cross ventilation to living areas</li> <li>▪ The units without dual aspect will be ventilated via the foyer areas which will be screened or louvred</li> <li>▪ All apartment depths will be between 10-18m</li> <li>▪ All kitchens will have natural ventilation</li> </ul>
Signage and Awnings	<ul style="list-style-type: none"> <li>▪ To provide shelter for public streets.</li> <li>▪ To ensure signage is in keeping with the desired streetscape character and with development in scale detail and overall design.</li> </ul>	<ul style="list-style-type: none"> <li>▪ All signage will be integrated into the design of the development</li> </ul>
Facades	<ul style="list-style-type: none"> <li>▪ To promote high architectural quality in residential flat building.</li> <li>▪ To ensure that new development have façade which define and enhance the public domain and the desired street character.</li> <li>▪ To ensure building element are integrated into the overall building form and façade design.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The building facades will be carefully articulated to reflect the particular spaces within</li> <li>▪ A variety of materials will be used that are sympathetic and complimentary to the surrounding residential buildings</li> </ul>
Roof Design	<ul style="list-style-type: none"> <li>▪ To provide quality roof designs, which contribute to the overall design and performance of residential flat buildings.</li> <li>▪ To integrate the design of the roof into the overall façade, building composition and desired contextual response.</li> <li>▪ To increase the longevity of buildings through weather protection.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The roof design relates to the overall form of the buildings</li> </ul>
Energy Efficiency	<ul style="list-style-type: none"> <li>▪ To reduce the necessity for mechanical heating and cooling.</li> <li>▪ To reduce reliance on fossil fuels.</li> <li>▪ To minimise green house emissions.</li> <li>▪ To support and promote renewable energy initiatives.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The design considers a variety of environmental methods to reduce greenhouse gas emissions</li> </ul>
Maintenance	<ul style="list-style-type: none"> <li>▪ To ensure long life and ease of maintenance for the development</li> </ul>	<ul style="list-style-type: none"> <li>▪ Robust durable materials will be used to increase life of building and</li> </ul>

		reduce maintenance
Waste Management	<ul style="list-style-type: none"> <li>▪ To avoid the generation of waste through design, material selection and building practices.</li> <li>▪ To plan for the types, amount and disposal of waste to be generated during demolition excavation and construction of the development.</li> <li>▪ To encourage waste minimisation include source separation for, reuses and recycling.</li> <li>▪ To ensure efficient storage and collection of waste and quality design facilities.</li> </ul>	<ul style="list-style-type: none"> <li>▪ A waste management plan will be prepared to minimise waste and recycle existing materials</li> </ul>
Water Conservation	<ul style="list-style-type: none"> <li>▪ To reduce mains consumption of potable water.</li> <li>▪ To reduce the quantity of storm water run off.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Rainwater will be collected and used for non potable water</li> <li>▪ Water sensitive design is used for the treatment and filtration of all stormwater</li> </ul>