

ASSESSMENT AGAINST NSW RESIDENTIAL FLAT DESIGN CODE – RULES OF THUMB



RULE OF THUMB		COMMENT
Open Space - communal	<p><i>A minimum of 25% of the open space area of a site should be a deep soil zone; more is desirable.</i></p> <p><i>Exceptions may be made in urban areas where sites are built out and there is no capacity for water infiltration.</i></p> <p><i>In these instances, stormwater treatment measures must be integrated with the design of the residential flat building.</i></p>	<p>The proposed changes do not alter the manner in which this rule of thumb (RoT) was previously considered.</p> <p>A portion of the site was set aside for deep soil landscaping along the western boundary.</p>
	<p><i>The area of communal open space required should generally be at least between 25 and 30% of the site area. Larger sites and brownfield sites may have potential for more than 30%.</i></p>	<p>The amount of communal open space at the podium level accounts for between 25 to 30% of the site area.</p>
	<p><i>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 a contribution to public open space.</i></p>	<p>Residential amenity for future users of the proposed apartments has been catered for with the inclusion of a balcony or terrace to each apartment which is at least equivalent to the minimum required and in most cases greater than the minimum requirement.</p>
Open Space - private	<p><i>The minimum recommended area of private open space for each apartment at ground level or similar space on a structure, such as on a podium or car park, is 25m²; the minimum preferred dimension in one direction is 4m.</i></p>	<p>Each apartment has a private terrace or balcony area which is either equal to or greater in area than the rule of thumb refer to the TAA area schedule at Appendix B.</p>
	<ul style="list-style-type: none"> ▪ <i>In terms of soil provision there is no minimum standard that can be applied to all situations 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:</i> ▪ <i>Large trees such as figs (canopy diameter of up to 16 metres at maturity)</i> <ul style="list-style-type: none"> - <i>minimum soil volume 150 cubic metres</i> - <i>minimum soil depth 1.3 metre</i> - <i>minimum soil area 10 metre x 10 metre area or equivalent</i> ▪ <i>Medium trees (8 metre canopy diameter at maturity)</i> 	<p>No changes are proposed to the previously approved planting associated with the podium level.</p>

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	<ul style="list-style-type: none"> - minimum soil volume 35 cubic metres - minimum soil depth 1 metre - approximate soil area 6 metre x 6 metre or equivalent <ul style="list-style-type: none"> ▪ Small trees (4 metre canopy diameter at maturity) - minimum soil volume 9 cubic metres - minimum soil depth 800mm - approximate soil area 3.5 metre x 3.5 metre or equivalent <ul style="list-style-type: none"> ▪ Shrubs - minimum soil depths 500-600mm <ul style="list-style-type: none"> ▪ Ground cover - minimum soil depths 300-450mm <ul style="list-style-type: none"> ▪ Turf - minimum soil depths 100-300mm - any subsurface drainage requirements are in addition to the minimum soil depths quoted above 	
Crime Prevention	Carry out a formal crime risk assessment for all residential developments of more than 20 new dwellings	A CPTED report was submitted to and approved with the original application. The nature of the proposed changes do not alter the outcomes and recommendations which have been implemented from the original report.
Separation Distances	<p>For buildings over three storeys, it is recommended that building separation increase in proportion to building height to ensure appropriate urban form, adequate amenity and privacy for building occupants. Suggested dimensions within a development, for internal courtyards and between adjoining sites are:</p> <ul style="list-style-type: none"> ▪ up to four storeys/12 metres - 12 metres between habitable rooms/balconies - 9 metres between habitable/balconies and non-habitable 	<p>The separation distances between all buildings complies and the proposed changes do not alter this outcome or result in the need for any changes to seek further compliance.</p> <p>The siting and internal layouts of each dwelling have been carefully planned to ensure that direct overlooking of primary living areas of other dwellings in the development is avoided.</p>

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	<p>rooms</p> <ul style="list-style-type: none"> - 6 metres between non-habitable rooms <ul style="list-style-type: none"> ▪ five to eight storeys/up to 25 metres - 18 metres between habitable rooms/balconies - 13 metres between habitable rooms/balconies and non-habitable rooms - 9 metres between non-habitable rooms <ul style="list-style-type: none"> ▪ nine storeys and above/ over 25 metres - 24 metres between habitable rooms/balconies - 18 metres between habitable rooms/balconies and non-habitable rooms - 12 metres between non-habitable rooms <ul style="list-style-type: none"> ▪ Allow zero building separation in appropriate contexts, such as in urban areas between street wall building types (party walls). 	
Accessibility	<p>Identify the access requirements from the street or car parking area to the apartment entrance.</p> <p>Follow the accessibility standard set out in Australian Standard AS 1428 (parts 1 and 2), as a minimum.</p> <p>Provide barrier free access to at least 20% of dwellings in the development.</p>	The proposed changes have been designed by TAA to comply.
Driveway Design	<p>Generally limit the width of driveways to a maximum of six metres.</p> <p>Locate vehicle entries away from main pedestrian entries and on secondary frontages.</p>	Driveway already constructed and widths comply.
Ventilation Requirements	<ul style="list-style-type: none"> ▪ Single-aspect apartments should be limited in depth to 8m from a window. 	The proposed changes will result in additional single aspect apartments, it is noted that overall this represents less than 5% of all units designed.

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	<ul style="list-style-type: none"> ▪ <i>The back of a kitchen should be no more than 8m from a window.</i> ▪ <i>The width of cross-over or cross-through apartments over 15m deep should be 4m or greater to avoid deep narrow apartment layouts.</i> ▪ <i>In general, an apartment building depth of 10-18 metres is appropriate. Developments that propose wider than 18 metres must demonstrate how satisfactory daylighting and natural ventilation are achieved.</i> ▪ <i>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).</i> 	<p>Due to the typology of the design, being a single central core surrounded by apartments on a single floor plate, not all single aspect apartments are limited in depth to 8m. In these apartments ceiling fans could be included. The internal widths of apartments are generally in accordance and where variations are proposed this has been off-set with wider windows to allow for greater opportunities for ventilation.</p> <p>Refer to the solar access analysis undertaken by TAA which demonstrates satisfactory day lighting into each apartment proposed in each building at greater than 80%, with 67% achieving natural cross-ventilation.</p>
	<ul style="list-style-type: none"> ▪ <i>Building depths, which support natural ventilation, typically range from 10 to 18 metres.</i> ▪ <i>Sixty percent (60%) of residential units should be naturally cross ventilated.</i> ▪ <i>Twenty five percent (25%) of kitchens within a development should have access to natural ventilation.</i> <p><i>Developments, which seek to vary from the minimum standards, must demonstrate how natural ventilation can be satisfactorily achieved, particularly in relation to habitable rooms.</i></p>	<p>Refer to the above. The proposed amendments do not alter the previously assessed design outcome which is consistent with this RoT.</p> <p>At least 25% of kitchens within the development have access to natural ventilation.</p>
Apartment Sizes	<p><i>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)</i></p> <p><i>- 1 bedroom apartment 50m²</i></p>	<p>A range of apartment sizes are proposed. Refer to area schedule prepared by TAA at Appendix B. All apartments have been designed so as to achieve an appropriate size and area in accordance with the RFDC.</p>

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	<ul style="list-style-type: none"> - 2 bedroom apartment 70m² - 3 bedroom apartment 95m² 	
Balcony Sizes	<p><i>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.</i></p> <p><i>Require scale plans of balcony with furniture layout to confirm adequate, useable space when an alternate balcony depth is proposed</i></p>	All balconies have been design to comply.
Apartment Design	<p><i>The following recommended dimensions are measured from finished floor level (FFL) to finished ceiling level (FCL). These are minimums only and do not preclude higher ceilings, if desired.</i></p> <ul style="list-style-type: none"> ▪ <i>in mixed use buildings: 3.3m minimum for ground floor retail or commercial and for first floor residential, retail or commercial to promote future flexibility of use</i> ▪ <i>in residential flat buildings in mixed use areas: 3.3m minimum for ground floor to promote future flexibility of use</i> ▪ <i>in residential flat buildings or other residential floors in mixed use buildings:</i> <ul style="list-style-type: none"> ○ <i>in general, 2.7m minimum for all habitable rooms on all floors, 2.4m is the preferred minimum for all non-habitable rooms, however 2.25m is permitted.</i> ○ <i>for two storey units, 2.4m minimum for second storey if 50% or more of the apartment has 2.7m minimum ceiling heights</i> ○ <i>for two-storey units with a two storey void space, 2.4m minimum ceiling heights</i> 	No change is proposed to this RoT. Floor to ceiling heights for each level within each building have been design to be 2.7m.

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	<ul style="list-style-type: none"> ○ <i>attic spaces, 1.5m minimum wall height at edge of room with a 30 degree minimum ceiling slope.</i> <p><i>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).</i></p>	
Apartment Access Design	<p><i>Optimise the number of ground floor apartments with separate entries and consider requiring an appropriate percentage of accessible units. This relates to the desired streetscape and topography of the site.</i></p> <p><i>Provide ground floor apartments with access to private open space, preferably as a terrace or garden.</i></p>	No change is proposed to this RoT. Entry to the commercial component of the development is separated from the residential lift lobbies.
	<ul style="list-style-type: none"> ▪ <i>In general, where units are arranged off double-loaded corridor, the number of units accessible from a single core/ corridor should be limited to eight. Exceptions may be allowed:</i> <ul style="list-style-type: none"> - <i>for adaptive reuse buildings</i> - <i>where developments can demonstrate the achievement of the desired streetscape character and entry response</i> - <i>where developments can demonstrate a high level of amenity for common lobbies, corridors and units, (cross over, dual aspect apartments).</i> 	The number of units accessible off any specific lobby and associated corridor has been limited to a maximum of eight in Building A.
Other Amenities in Apartments	<p><i>In addition to kitchen cupboards and bedroom wardrobes, provide accessible storage facilities at the following rates:</i></p> <ul style="list-style-type: none"> - <i>studio apartments 6m³</i> - <i>one-bedroom apartments 6m³</i> - <i>two-bedroom apartments 8m³</i> - <i>three plus bedroom apartments 10m³</i> 	Storage rates within each apartment are itemised in the TAA area schedule included in Appendix B and have been design to comply.

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Solar Access	<i>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</i>	More than 70% of living rooms and private open spaces achieve the minimum solar access, without the need to consider the higher density minimum.
	<i>Limit the number of single-aspect apartments with a southerly aspect (SW-SE) to a maximum of 10% of the total units proposed. Developments which seek to vary from the minimum standards must demonstrate how site constraints and orientation prohibit the achievement of these standards and how energy efficiency is addressed (see Orientation and Energy Efficiency).</i>	No change to this RoT. 6 out of 209 apartments could be considered as single aspect with a southern orientation being less than 3%.
Waste	<i>Supply waste management plans as part of the development application submission as per the NSW Waste Board.</i>	A waste management plan was submitted as part of the original Environmental Assessment. No change proposed with this Mod 1.
Water	<i>Rainwater is not to be collected from roofs coated with lead- or bitumen-based paints, or from asbestos-cement roofs. Normal guttering is sufficient for water collections provided that it is kept clear of leaves and debris.</i>	Normal guttering is proposed within the residential apartment buildings design.