Submission No 40

INQUIRY INTO APARTMENT DESIGN STANDARDS

Organisation: Darebin City Council

Date Received: 31 October 2021

City of DAREBIN

the place to live

Submission to Victorian Parliamentary Inquiry into Apartment Design Standards

October 2021

Contents

Acknowledgement of Traditional Owners

Darebin City Council acknowledges the Wurundjeri Woi Wurrung people as the traditional owners and custodians of the land and waters we now call Darebin and pays respect to their elders, past, present and emerging.

Council affirms that Wurundjeri Woi Wurrung people have lived on this land for millennia, practising their ceremonies of celebration, initiation and renewal.

Council respects and recognises all Aboriginal and Torres Strait Islander communities and their values, living culture and practices, including their continuing spiritual connection to the land and waters and their right to self-determination.

Executive Summary

Darebin City Council welcomes the opportunity to provide input to the Victorian Parliamentary Inquiry into Apartment Design Standards with a submission. This submission has been prepared by Council officers and is not the result of a formal resolution of Darebin City Council, however it has been developed considering the goals and objectives outlined in Council adopted strategies.

In the past few years, Darebin City Council has undertaken extensive work to respond to the growing number of apartment building applications and address apartment design quality. One of key initiatives is the development of the Design Excellence Program as an integrated approach to improving design quality within Darebin to create sustainable and liveable neighbourhoods that will stand the test of time and address climate emergency.

One of the key deliverables for the program includes development of two documents namely Darebin Good Design Guide – Apartment Development. These guidelines build on existing objectives and standards in the planning scheme as well as fill the gap where required by providing diagrams and images of preferred design outcomes.

Design of apartments in Victoria is currently being facilitated through the Better Apartment Design Standards introduced in 2015. These standards included significant guidance of the size of the apartments, size of the rooms, balconies, etc. Yet, it did not provide much guidance on key issues like access to natural light and building separation, which can have a significant impact on the amenity of the apartments.

The submission identifies the key factors affecting the amenity of apartments including access to daylight, outlook, building separation and provision of communal open space. Provision of these standards would not only provide more clarity for applicants but also provide certainty for the community as well as improved amenity for the residents. There is strong research evidence that suggests positive impact of daylight on mental and wellbeing.

Review of apartment design standards in other jurisdictions indicate that NSW, WA and SA aim for much higher level of amenity then apartment standards in Victoria including providing guidance on daylight, building separation as well as larger provision of communal open space. Internally cities like London and Auckland are pushing boundaries when it comes to providing guidance on daylight as well as communal open space.

Over the past 18 months numerous lockdowns due to Covid-19 has highlighted the importance of access to natural light as everyone spent more time locked in our homes. This has impacted people living in apartments the most due to limited size of the dwelling and limited access to communal open space. Several other states have much higher internal amenity standards and it is about time that similar standards are adopted in Victoria.

1. Introduction

The City of Darebin is currently experiencing rapid and significant development change. Contextually, Darebin's proximity to Melbourne's CBD and major health and education institutions, good access to public transport, and availability of residential and brownfield development sites are becoming increasingly attractive to the property development market.

The forecasted population for the City of Darebin is 230,118 by 2041, an increase of approximately 68,509. To accommodate this expected population increase it is anticipated that by this time, apartments will become more common.

In the past few years, Darebin City Council has undertaken extensive work to respond to the growing number of apartment building applications and address apartment design quality. One of key initiatives is the development of the Design Excellence Program as an integrated approach to improving design quality within Darebin to create sustainable and liveable neighbourhoods that will stand the test of time and address the climate emergency. Key features of the project include:

- Dedicated officer to champion and lead design excellence.
- Holistic design excellence program including a range of initiatives at various levels.
- Council to take leadership in good design by walking the talk.
- Internal capacity building for planners through regular training and workshops to improve decision making.

One of the key deliverables for the program includes development of two documents namely Darebin Good Design Guide – Apartment Development and Darebin Good Design Guide – Medium Density Development. These guideline documents build on existing objectives and standards in the planning scheme as well as fill the gap where required by providing diagrams and images of preferred design outcomes.

Although the Darebin Good Design Guides have been largely well received by the industry there are challenges in implementing some of the requirements as they are not formal part of the planning scheme and go above and beyond the Better Apartment Design Standards.

This submission builds on some of the requirements in the Darebin Good Design guide and responds to the inquiry by addressing the following points in relation to the terms of reference:

1. Current apartment living standards in Victoria;
2. Improvements that can be made to the liveability in apartments and apartment building developments, including communal areas; and
3. Initiatives undertaken by other states or nations that have improved apartment design standards.

2. Current apartment living standards in Victoria

Design of apartments in Victoria is currently being facilitated through the Better Apartment Design Standards introduced in 2015. Introduction of these standards has been a significant step in improving the design quality of apartments in Victoria as before these standards there was not much guidance in the planning scheme on apartment developments.

Better Apartment Design Standards included significant guidance of the size of the apartments, size of the rooms, balconies, etc. Yet, it did not provide much guidance on key issues like access to natural light and building separation, which can have a significant impact on the amenity of the apartments.

3. Improvements that can be made to the liveability in apartments and apartment building developments.

Daylight and outlook

There is strong evidence on the association of daylight/sunlight and people's physical and mental health and quality of life. In the report, Giles-Corti et al. (2015) have presented a summarised review of literature proving the association between daylight/sunlight and positive health outcomes in their writing- *Better Apartments: What does the evidence tell us about the impact of health and wellbeing*.

The summary of the literature reviewed is reproduced below:

Physical health

Brown & Jacobs 2011: Inadequate daylight / residential light had a statistically significant association with fall incidents

Lai et al. 2013: A statistically significant association was found between lower SVF levels (i.e. lack of daylight), living on lower floors, and higher prevalence of TB cases.

Psychological health

Brown & Jacobs 2011: Inadequate daylight / residential light had a statistically significant association with depression

Well-being / comfort

Cheung and Chung 2008: Daylight availability was very important to participants (meaning that it has the potential to greatly influence their overall residential satisfaction / well-being)

Lau et al. 2013: Inadequate sunlight / solar access was linked with decreased residential satisfaction (over 60% of residents were unsatisfied)

Recent research has found insufficient daylighting levels in many Melbourne apartments due to deep floor plates and external obstructions and recommended that approximately 30% of window to floor area ratio should be required for bedrooms in the south direction to achieve acceptable daylighting levels (Abidi. S, 2020).

The introduction of Better Apartment Design Standards introduced minimum dimensions for snorkel bedrooms and prohibited bedrooms with borrowed light. This resulted in a change in apartment layout and improvement in the quality of the dwellings, but they are still not at par with some of the requirements in other states and countries.

Assessing daylight can be quite challenging due to a range of variables including orientation as well as impact of future development. Although there is limited control over the orientation of the site and building in a dense area like inner Melbourne, we can control the space between buildings to ensure there is a minimum amount of daylight as well and sunlight to all dwellings. There are a range of methods to measure daylight with Daylight Factor being one of the most common and simplest to use. Daylight Factor is measured under an overcast sky and does not factor in orientation providing a good base for a minimum standard.

A recent research by Abidi. S (2020) in the daylight in apartments in Melbourne demonstrated the limitation of snorkel bedrooms in providing daylight in bedrooms. The diagram below clearly

demonstrates that the snorkel type design for bedroom primarily provides daylight in the snorkel area whereas the rest of the bedroom fails in receiving adequate daylight.

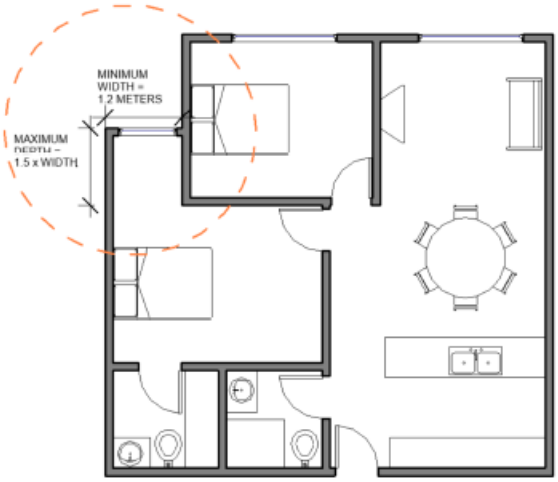


Figure 2. Plan showing the snorkel design window as per Victoria Planning Provision Amendment VC136.

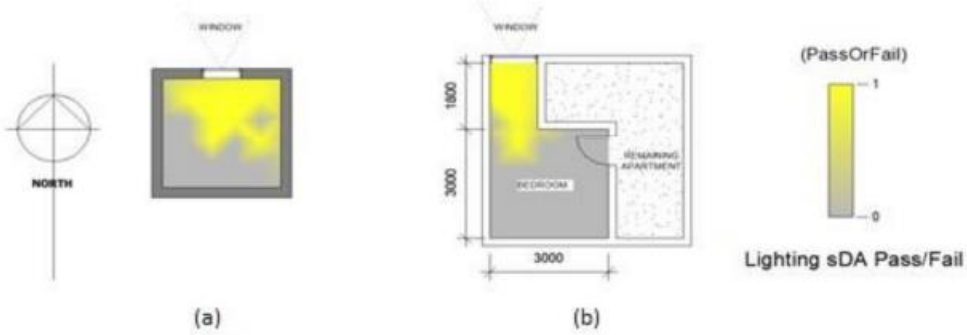


Figure 8. Light distribution as sDA in (a) standard layout (b) Snorkel layout.

Source: Abidi, S., & Rajagopalan, P. (2020). Investigating daylight in the apartment buildings in Melbourne, Australia. Infrastructures (Basel), 5(10), 81–.

Internationally, cities like London and Auckland have minimum daylight factor standards and well as minimum sunlight access requirements for new developments. Locally, Moreland City Council developed daylight factor standards as part of their Moreland Apartment Design Code. Due to the complexity of assessing daylight these standards were used to define Building Separation standards as explained in the section below.

Building Separation

The gap or separation between buildings is one of the biggest issues affecting the natural light and outlook for new apartment developments. Although there are front and rear setback requirements in many structure plans and Design and Development Overlays (DDOs) there are usually no requirements regarding setbacks between buildings or separation between towers on large lots. On smaller lots this can cause issues around equitable development in terms of existing developments compromising the development potential for new sites as well as new developments compromising the amenity of existing developments by significantly affecting access to natural light and outlook.

The impact of new development on the amenity of existing development has been a cause of friction between residents of existing developments and applicants within Darebin for a long time. Council

has tried to negotiate better outcomes but without any specific guidance in the planning scheme it has not always been successful. These issues have been around for a long time and first came to fore Melbourne wide in 2011-12 due to some major developments in Southbank and other inner-city areas.

Source: www.theage.com.au accessed 17 Aug 2012

Darebin City Council has faced similar issues for new developments within its activity centres and activity corridors including Preston Junction where lack of adequate separation would significantly impact the amenity of existing developments when an adjoining site develops.

Lack of adequate separation between buildings mean new developments are required to put privacy screens to ensure it does not impact the privacy of existing developments. But this results in significant impact on the amenity of new developments as most apartments have single outlook and privacy screens on balconies along primary outlook can create a sense of enclosure that would impact the amenity of the dwelling.

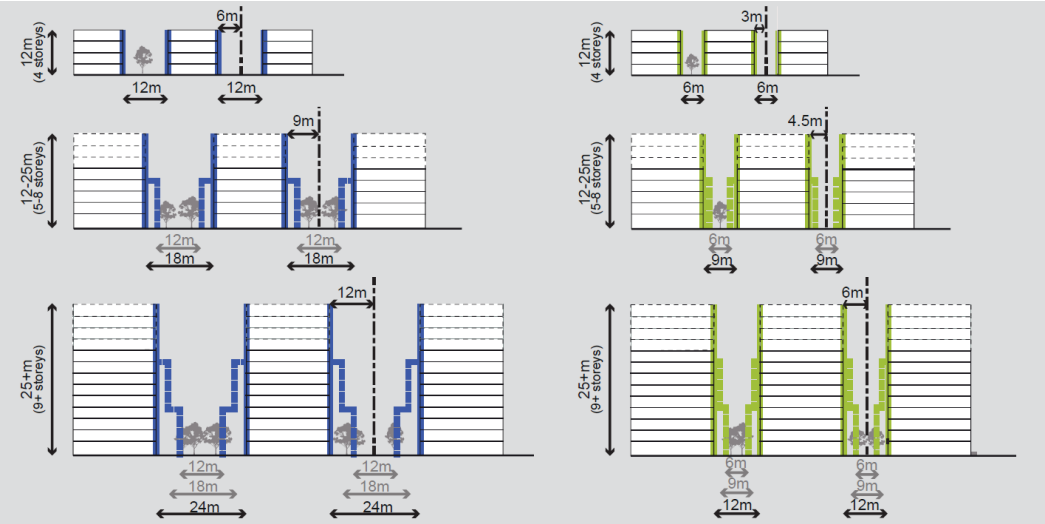
Typically, planners and applicants use a separation of 9.0metres between developments to avoid the use of privacy screen. The 9.0m rule is derived from Res Code and was developed for low rise developments, not necessarily high-rise apartment buildings. Although a 9.0m gap might be adequate from a privacy perspective, it was not designed to make sure apartments receive adequate daylight. For example, a 9.0m gap between two 10 storey buildings would not be able to provide adequate daylight to the apartments located in the bottom half of the building. Currently, Darebin City Council is assessing applications of developments up to 20 storeys without any standards in the planning scheme around adequate building separation.

Darebin City Council has included some guidance around building separation in Darebin Good Design Guide – Apartment Developments. These standards are based on building separation standards included as a local policy in the adjoining Moreland City Council. Darebin's City Designer was involved in developing the building separation standards at Moreland which went through a planning scheme amendment and are now included as a local policy at Moreland.

These building separation standards were developed based on a rigorous analysis and received a favourable recommendation from the planning panel reviewing the planning scheme amendment. The

standards are based on achieving a 1% daylight factor for living areas and 0.5% daylight factor for bedrooms. These daylight factor standards were developed based on local and international research and daylight modelling to set a minimum benchmark for natural light in dwellings.

The building separation standards were calculated to ensure the above daylight factor standards would be met regardless of what happens on adjoining sites. Furthermore, the building separation standards use a combination of daylight and outlook to ensure adequate setback is provided based on the daylight and outlook requirement. Living areas are considered primary outlook and require greater separation whereas bedrooms are considered secondary outlook and require less separation. A combination of this resulted in the building separation standards illustrated below.



1.2.1 Building separation for living/main balcony outlook

1.2.2 Building separation for bedroom outlook

Table D.1.2.a Building separation to adjacent properties

	Minimum building separation (measured from property boundary)	
	Living/Main balcony outlook to boundary line	Bedroom outlook to boundary line
Up to 4 storeys/12 metres	6 metres	3 metres
5-8 storeys (12-25m high) 5-8 storeys /up to 25 metres	9 metres	4.5 metres
9+ storeys/over 25 metres	12 metres	6 metres

Source: Moreland Apartment Design Code

Table D.1.2.b Building separation to a lane

	Minimum building separation	
	Living/Main balcony outlook	Bedroom outlook
2 storeys (9 metres high)	0 metres (from boundary)	0 metres (from boundary)
3-8 storeys (up to 25 metres)	6 metres (from lane centre line)	3 metres (from lane centre line)
9+ storeys/over 25 metres	9 metres (from lane centre line)	6 metres (from lane centre line)

NOTE:

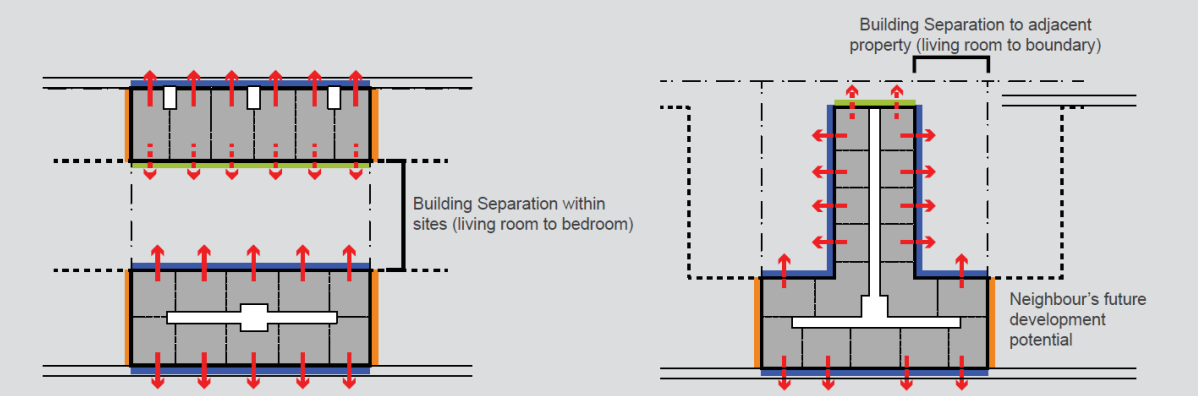
- *The building separation requirements commence at the first level of residential use.*

Table D.1.2.c Building separation for buildings within sites

	Minimum building separation				
	Living/Main balcony outlook to Living/ Main balcony outlook	Bedroom outlook to bedroom outlook	Living/Main balcony outlook to bedroom outlook	Living/Main balcony outlook to no outlook	Bedroom outlook to no outlook
Up to 4 storeys/ 12 metres	12 m	6 m	9 m	6 m	3 m
5-8 storeys/ up to 25 metres	18 m	9 m	13.5 m	9 m	4.5 m
9+ storeys/ over 25 metres	24 m	12 m	18 m	12 m	6 m

Source: Moreland Apartment Design Code

Provision of building separation standards based on outlooks results in a sophisticated approach that allows for design flexibility depending on the site, shape and orientation of the site without compromising the development potential for adjoining sites. It also means setback or separation is required if there are no windows or no outlook providing further flexibility. The diagram below shows some design options based on different outlooks.



1.2.3 Building separation allows flexibility and different design outcomes depending on the type of outlook

Source: Moreland Apartment Design Code

Building separation standards can work in conjunction with any local height and setback requirements specified in a structure plan or DDO. Provision of adequate building separation has other benefits as it naturally allows for creation of courtyards which can be used to provide communal open space. Having communal open space with dwellings overlooking creates a sense of community and provides activation and supervision.

As part of the Residential Flat Design Code, New South Wales has had building separation standards since 2000. These were further updated as part of a recent review and have worked quite well. Building separation standards are overdue to be included in Better Apartment Design Standards as lack of adequate separation is having a huge impact on the amenity and quality of apartment living. This has had a compounding effect during Covid-19 as people spend more time in their homes and need adequate access to daylight.

Lightwells

Lightwells are small sized courtyards that are used to provide natural light to dwellings, primarily to bedrooms. Due to their small size it is generally accepted that they are not suitable to be the only source of natural light for living areas.

Lightwells are widely used in the design of new apartments in dense areas to provide natural light to bedrooms. Yet, there are no minimum requirements for light well sizes in the planning scheme. This has resulted in some light wells as small as 1-1.5m wide being the only source of natural light in a 6-10 storey development. This can significantly reduce access to natural light and hence amenity of apartments. States like WA prevent the use of lightwells as the only source of natural light.

Moreland City Council has specified minimum light well requirements based on the daylight factor standards identified above. These lightwell requirements were development based on testing of the daylight factor standards to make sure that the bedrooms receive appropriate natural light.

Table D.1.2.d Light well minimum areas and dimensions

Dwelling type	Minimum area and dimension
Up to 4 storeys/12 metres	$9m^2$ (minimum width 3m)
5-8 storeys/up to 25 metres	$29m^2$ (minimum width 4.5m)
9+ storeys/over 25 metres	$51m^2$ (minimum width 6m)

NOTE:

- *The light well minimum areas and dimensions may need to be varied for buildings containing multiple levels of non-residential uses.*

Source: Moreland Apartment Design Code

It is important to note that the minimum lightwells should be provided on the subject site as relying on adjoining sites to provide half the light well size can significantly impact development potential as it will restrict possible layout alternatives.

Communal open space

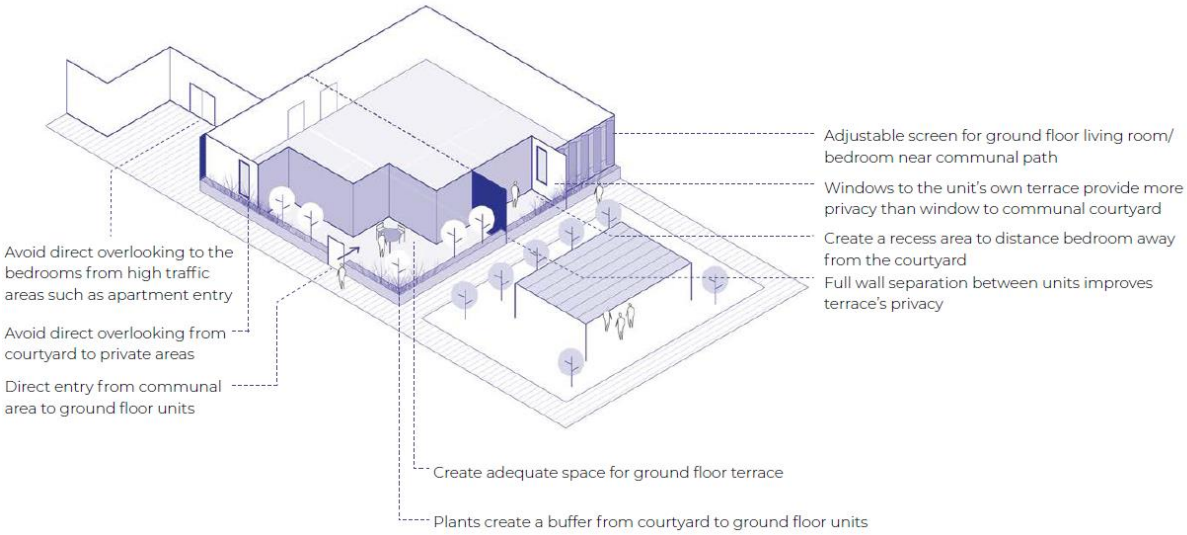
Communal open space plays a significant role in improving the amenity of apartment developments. Apart from being an extension of one's private open space it also allows interaction between residents and creates a sense of community.

Update of the Better Apartment Design Standards recommends provision of minimum 30sqm of communal open space for developments of 10 or more dwellings. Darebin City Councils supports this

increase in the provision of communal open space as it directly aligns with Council's ambitions with regards to creating sustainable and resilient neighbourhoods.

In addition to providing enough area of communal open space it is important to ensure the communal open space has the highest level of amenity and is connected to the rest of the development. Solar orientation, access and passive surveillance should be prioritised to ensure the communal open space is inviting and well used.

As part of the Darebin Good Design Guide – Apartment Development, Council recommends providing high quality communal open space that is appropriately sized and provides adequate amenity in the courtyard or on roof tops.



Source: Darebin Good Design Guide – Apartment Development

Ground level communal open space activated by overlooking apartments.

Source: Hawke & King designed by Six Degrees Architects, photo by Greg Elms.

Rooftop communal open space with landscaping and weather protection.

Source: Nightingale designed by Breathe Architecture, photo by Tim Ross.

4. Initiatives undertaken by other states or nations that have improved apartment design standards

Apartment Design Guide, New South Wales

Daylight

Part 4A of the NSW Apartment Design Guide provides measurable criteria for direct sunlight in the form of hours to specific rooms, spaces and proportion of dwelling

The aim of the first - Objective 4A-1 is:

> *To optimize the number of apartments receiving sunlight to habitable rooms, primary windows andprivate open space.*

Three design criteria set out measurable requirements for achieving this objective in apartment developments,as follows:

1. *Living rooms and private open spaces of at least 70%of apartments in a building receive a minimum of 2 hours direct sunlight between 9am and 3pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas*
2. *In all other areas, living rooms and private open spacesof at least 70% of apartments in a building receive a minimum of 3 hours direct sunlight between 9am and 3pm at mid-winter*
3. *A maximum of 15% of apartments in a building receive no direct sunlight between 9am and 3pm at mid-winter*

Design guidance set out under this objective provide supplementary advice on design responses that can be used to achieve this objective and criteria. One guidance deals with measuring direct sunlight:

To maximise the benefit to residents of direct sunlightwithin living rooms and private open spaces, a minimum of 1m^2 of direct sunlight, measured at 1m above floor level, is achieved for at least 15 minutes

The objectives 4A-2 deals with solar access in circumstances where sunlight is limited and objective 4A-3 deals with shading and glaring controls.

Building Separation

Part 2F of the NSW Apartment Design Guide provides minimum separation distances to be provided in proportion to the building height to support residential amenity such as visual and acoustical privacy, natural ventilation, sunlight and daylight access and outlook, and to provide suitable areas for communal open spaces, deep soil zones and landscaping.

Minimum separation distances for buildings are:
Up to four storeys (approximately 12m):

- *12m between habitable rooms/balconies*
- *9m between habitable and non-habitable rooms*
- *6m between non-habitable rooms*

Five to eight storeys (approximately 25m):

- *18m between habitable rooms/balconies*
- *12m between habitable and non-habitable rooms*
- *9m between non-habitable rooms*

Nine storeys and above (over 25m):

- *24m between habitable rooms/balconies*
- *18m between habitable and non-habitable rooms*
- *12m between non-habitable rooms*

At the boundary between a change in zone from apartment buildings to a lower density area, increase the building setback from the boundary by 3m.

Required setbacks may be greater than required building separations to achieve better amenity outcomes.

The guide recommends testing separation controls for sunlight and daylight access to open spaces.

Natural ventilation

Objective 4B Natural Ventilation seeks that all habitable rooms are naturally ventilated. Following design guidance is provided:

- *The building's orientation maximises capture and use of prevailing breezes for natural ventilation in habitable rooms*
- *Depths of habitable rooms support natural ventilation*
- *The area of unobstructed window openings should be equal to at least 5% of the floor area served*
- *Light wells are not the primary air source for habitable rooms*
- *Doors and openable windows maximise natural ventilation opportunities by using the following design solutions:*
    - *adjustable windows with large effective openable areas*
    - *a variety of window types that provide safety and flexibility such as awnings and louvres*
    - *windows which the occupants can reconfigure to funnel breezes into the apartment such as vertical louvres, casement windows and externally opening doors*

Objective 4B-2 requires courtyards or building indentations to have a width to depth ratio of 2:1 or 3:1 to ensure adequate air circulation and avoid trapped smells. Objective 4B-3 mandates a higher percentage of apartments in the first nine storeys to be naturally ventilated (60%) against 40% in Victoria. There is also a maximum number of apartments that can be provided off a circulation core on a single level to minimise the occurrence of single aspect apartments in NSW Apartment Guidelines.

Communal open space

NSW has a more comprehensive policy on achieving adequate area of communal open space including stipulated the proportion of the site allocated to open space, its minimum dimensions, direct sunlight to the space, provision of different facilities and deep soil zones and/or provisions for trees. Objective 3D-1 requires that Communal open space has a minimum area equal to 25% of the site.

Residential Design Codes Volume 2 – Apartments, Western Australia

Daylight

Section 4.1.1 of Western Australia State Planning Policy 7.3 Residential Design Codes Volume 2 – Apartments contain minimum acceptable outcomes for hours of sunlight like NSW. Additionally, it has the following measurable outcomes for window sizing and performance-based criteria for shading devices.

A 4.1.2 Every habitable room has at least one window in an external wall, visible from all parts of the room, with a glazed area not less than 10 per cent of the floor area and comprising a minimum of 50 per cent of clear glazing.

A 4.1.3 Lightwells and/or skylights do not form the primary source of daylight to any habitable room.

A 4.1.4 The building is oriented and incorporates external shading devices in order to:

- *minimise direct sunlight to habitable rooms: between late September and early March in climate zones 4, 5 and 6 only AND in all seasons in climate zones 1 and 3*
- *permit winter sun to habitable rooms in accordance with A 4.1.1 (a).*

Building Separation

Similar to NSW, Western Australia State Planning Policy 7.3 Residential Design Codes Volume 2 – Apartments A2.7.1 required the development to comply with the separation distances set out in Table below:

Table 2.7 Building separation

	Separation between:	Building height		
		≤ 4 storeys (up to 15m)	5-8 storeys (up to 28m)	≥ 9 storeys (over 28m)
Within site boundary	Habitable rooms/balconies	12m	18m	24m
	Habitable and non-habitable rooms	7.5m	12m	18m
	Non-habitable rooms	4.5m	6m	9m
To adjoining property boundaries	Habitable rooms/balconies and boundary	Refer *2.4 Side and rear setbacks* (Table 2.1) and *3.5 Visual privacy* (Table 3.5)	9m	12m
Distances apply from major openings of rooms, or the inside of balustrading of balconies. Average dimensions may be applied subject to major openings meeting other requirements for privacy, daylight and the like.				

Natural ventilation

Section 4.2 of State Planning Policy 7.3 Residential Design Codes Volume 2 – Apartments also requires a minimum 60% of dwellings to be naturally cross-ventilated in the first nine storeys of the building. Additional outcomes are required for ventilation openings and room depths.

A4.2.2 (b) Single aspect apartments included within the 60 per cent minimum at (a) above must have:

- *ventilation openings oriented between 45o – 90o of the prevailing cooling wind direction AND*
- *room depth no greater than 3 × ceiling height*

Further Design Guidance is provided on the use of highlight windows, stack effect ventilation, trickle vents and courtyards of a minimum width-to-depth ratio of 3:1

Communal Open Space

In contrast, WA State Planning Policy 7.3 Residential Design Codes Volume 2 - Apartments Section 3.4 requires 6m2 of communal Open Space per dwelling up to a maximum of 300 m2 for developments of more than 10 dwellings. Other required Outcomes are:

A 3.4.2 *Communal open space located on the ground floor or on floors serviced by lifts must be accessible from the primary street entry of the development.*

A 3.4.3 *There is 50 per cent direct sunlight to at least one communal open space area for a minimum of two hours between 9am and 3pm on 21 June.*

A 3.4.4 *Communal open space is co-located with deep soil areas and/or planting on structure areas and/ or co-indoor communal spaces.*

A 3.4.5 *Communal open space is separated or screened from adverse amenity impacts such as bins, vents, condenser units, noise sources and vehicle circulation areas.*

A 3.4.6 *Communal open space is well-lit, minimises places for concealment and is open to passive surveillance from adjoining dwellings and/or the public realm.*

A 3.4.7 *Communal open space is designed and oriented to minimise the impacts of noise, odour, light-spill and* overlooking on the habitable rooms and private open spaces within the site and of neighbouring properties.

Design Guidelines: Design quality and housing choice, South Australia

Daylight

SA standards also contain additional guidance for lightwells in the form of a minimum and maximum dimensions, something that other states guidelines have missing.

Light well minimum areas and dimensions

Building type	Minimum area and dimension
Up to 4 storeys/12m	9m² (min. width 3m)
5-8 storeys/up to 25m	29m² (min. width 4.5m)
9+ storeys/over 25m	51m² (min. width 6m)

Note: The light well minimum areas and dimensions may need to be varied for buildings containing multiple levels of non-residential uses

Communal Open Space

SA's proposed guidelines include extra communal space per dwelling as compared to VIC, and no requirement for a minimum number of dwellings, although minimum site required to be set aside for communal open area is less than Vic and NSW. The proposed guidelines require the provision of communal space in group housing or apartment developments that meets the following criteria:

- *5m2 per dwelling up to 12.5% of the site area*
- *A minimum consolidated area of 50m2*
- *Have a minimum dimension of 4m*
- *Achieve direct sunlight to at least 50% of the primary usable area for 2 hours between 9-3pm on June 21st (winter solstice)*

Auckland Design Manual, Auckland

Daylight

Auckland Design Manual provides the following standards for sunlight and daylight.

- *At least 70% of living rooms and private open spaces in a development should receive a* ***minimum of 3 hours of direct sunlight*** *between 9 a.m. and 3 p.m. in mid-winter.*
- *limit single aspect apartments with a* ***southerly aspect*** *(southwest through to southeast) to a* ***maximum of 10% of the total units*** *proposed. Developments that do not meet this minimum should be able to demonstrate how the site constraints and orientation prohibit these standards from being achieved, and how issues of energy efficiency will be addressed*

The minimum requirement of 3 hours of sunlight required is more significant than Australian standards.

Natural ventilation

Auckland Design Manual notes that a building that is deeper than 14 metres cannot be naturally ventilated. Natural ventilation is environmentally preferable and often economically advantageous as the cost of providing air conditioning may be quite high over the building's life.

Good Quality Housing for all Londoners, London Plan Guidance, London

Daylight

Recent London Plan Guidance (draft for public consultation 2020) specifies ADF daylight measures to be achieved. It contains the following guidance on Daylight, sunlight and overshadowing:

> ***C5.3.1*** *New dwellings should achieve a minimum average daylight factor (ADF) target value of 1 per cent for a bedroom and 1.5 per cent for a living room.*
>
> ***C5.3.2*** *Proposed development should maximise quality and availability of sunlight and natural light in outdoor spaces, particularly in winter. Outdoor spaces should benefit from at least two hours of daylight on 21st March into 50 per cent of space in line with BRE guidance.*
>
> ***C5.3.3*** *All homes must provide for direct sunlight to enter at least one habitable room for part of the day. Living areas and kitchen dining spaces should preferably receive direct sunlight.*

Superseded UK state standards (BS 8206-2:2008) used ADF method and required that a room receive at least 25% of the annual probable sunlight hours. 5% of the required direct sunlight should be accessed from September 21 to March 21. UK has now adopted European Union standards.

Building Separation

Proposed London Planning Guidance recommends following standards for Aspect and Outlook in Section C5

C5.2.1 *All new dwellings should be dual aspect, unless there are exceptional circumstances that justify the inclusion of any single-aspect homes. Single-aspect dwellings that are north facing, contain three or more bedrooms, or are exposed to noise levels with significant adverse effects on health and quality of life, should not be permitted.*

C5.2.2 *Where single-aspect dwellings are proposed (by exception), the design team should demonstrate how good levels of ventilation, daylight, privacy and thermal comfort will be provided to each habitable room and the kitchen.*

Communal Open Space

Proposed London Plan Guidance contains additional requirements to respond to the needs of children and young persons in planning for communal spaces in residential developments.

C1.4.2 *For developments where 10 or more children and young people are expected to live, development proposals should make appropriate play and informal recreation provision in accordance with London Plan Policy S4. The GLA Population Yield Calculator should be used to calculate the expected number of children and young people likely to live in the development. Children's play space should be designed to be stimulating and incorporate greenery, be overlooked to enable passive surveillance, be accessible to all tenures and be safely accessed from the street by children and young people independently.*

5. Conclusion

The Victorian Legislative Assembly Environment and Planning Committee's 'Inquiry into Apartment Design Standards is a welcomed opportunity for Darebin to reaffirm its commitment to design quality of apartments particularly as the population increases and we all move forward with the challenges of COVID-19.

The submission outlines areas where there is scope to improve the amenity of new developments. It also gives examples of what these improvements could look like and how current Victorian apartment design standards stack up against other states as well as countries. As can be seen from Section 4 of the submission design standards in states like NSW, WA and SA aim for much higher level of amenity then apartment standards in Victoria. Additionally, there is academic research suggesting the improvement in dwelling amenity due to these increased standards.

The submission also highlights some of the work that Darebin City Council is undertaking in terms of achieving design excellence to deliver sustainable and resilient city. The need for improved amenity for apartment development has been experienced by many in the past 18 months of the pandemic where people have had to spend more time in their homes and work from homes. Several other states have much higher internal amenity standards and it is about time that similar standards are adopted in Victoria to make sure our apartments are liveable and can stand the test of time.

Council is happy to present at the hearing and elaborate on any of the issues identified in this submission paper if required.

6. References

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