

**Supplementary  
Submission  
No 20F**

## **INQUIRY INTO APARTMENT DESIGN STANDARDS**

**Organisation:** Department of Environment, Land, Water and Planning (DELWP)

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# BETTER APARTMENTS

A DISCUSSION PAPER

May 2015





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# 1 Minister's foreword



For the past four years Melbourne has won the title of 'World's Most Liveable City' based on its excellent access to healthcare and education, vibrant cultural life, healthy environment and strong infrastructure base.

The Andrews Government is committed to maintaining and building on these strengths, and making sure the benefits of this most liveable city are available to all Victorians.

What we do well now, we will do better in the future by aspiring to be world leaders in urban design and renewal. We will continue to invest in our cities and towns, open spaces, access to and provision of public transport and, importantly, our housing standards and quality.

Planning plays a leading role in supporting sustainable growth and accommodating an anticipated increase in population. Medium and higher density residential development will be a key component of this as our city changes shape. In Melbourne alone it is estimated that an additional 480,000 apartments will be required to accommodate a projected population of 7.7 million by 2051. The demography of Melbourne is also changing. More and more people, including families and the elderly, are choosing to live in apartments.

There are approximately 650 hectares of developable land on the doorstep of our Central Business District, including Fishermans Bend, E-Gate, Docklands and the Arden-Macaulay precinct in North Melbourne. Many of these areas will feature apartment buildings as the dominant form of residential development. It has also long been government policy to support medium density development around train stations, in activity centres and along public transport corridors. The opportunity to influence apartment design is very real and immediate.

The right mechanisms must be put in place to promote sustainable, high quality apartment living opportunities. Now is the time for a discussion on what these apartments should look and feel like. This discussion paper Better Apartments is the beginning of a wider conversation the Andrews Government is having with Victorians on how to maintain liveability, while planning for our growing population. It is supported by the Government's refresh of Plan Melbourne, and is a demonstration of our commitment to transparency in planning processes. We will continue to engage with the wider community in planning for our city's future.

I invite you - our community - to embark on this journey with us, to read and get involved in the discussion on Better Apartments. We have the opportunity now to set the groundwork to ensure that as our state grows, so does our capacity for excellence in design, and provision of quality living opportunities for all Victorians.

A handwritten signature in blue ink that reads "Richard Wynne". The signature is fluid and cursive, written in a professional style.

**Hon. Richard Wynne**  
**Minister for Planning**



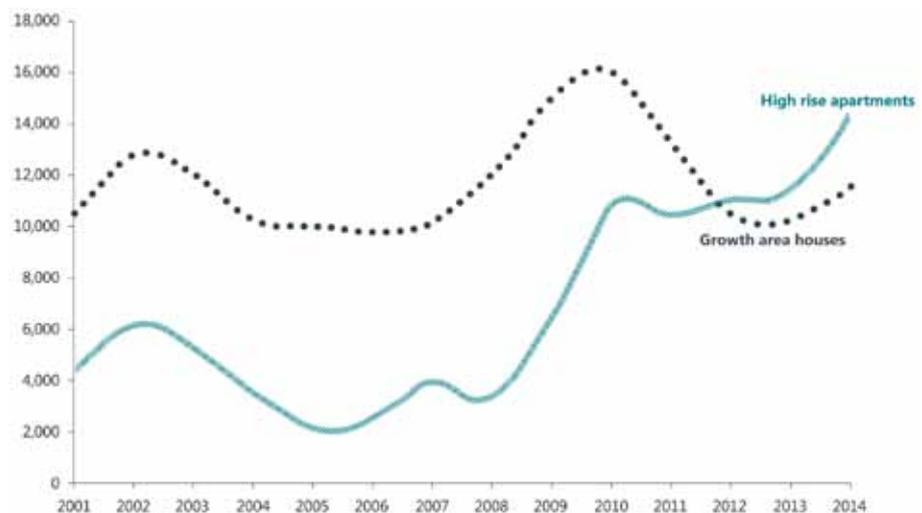
## 2 Purpose

### Time to take stock

The population of Victoria – and Melbourne in particular – is growing and this is expected to continue. By 2051, the number of households in greater Melbourne is projected to almost double from 1.59 million in 2011 to 3.11 million. We face a huge challenge to ensure there is sufficient housing to meet the needs of future households.

Apartments are an important part of our housing mix. The number of apartments being approved and built in Victoria makes up nearly one third of all new dwellings approved across the state – more than at any time in our history.

Since 2009, Melbourne has experienced successive years of record apartment approvals and development. For the first time there are more apartments being built than houses in Melbourne’s growth areas.



**Figure 1: Annual approvals of dwellings by type, Melbourne 2001-2014**

*(Source: ABS Building approvals, cat.no. 8731.0)*

With this growth comes natural ‘growing pains’ and there are concerns across the community about the quality of apartments being built in Victoria.

The Victorian Government is committed to ensuring apartments are designed to meet the needs of all occupants now and in the future, while ensuring an adequate supply and mix of apartments.

We believe apartments should be somewhere that people can enjoy living throughout their lives. An apartment should be a well-made, well-designed asset.

The Victorian Government understands the pressures on industry and councils to design, assess and construct apartments in a timely fashion, and also realises that these pressures are often competing. Everyone, including developers and decision-makers, would benefit from greater clarity on what is appropriate, in what circumstances, and where discretion could be used.

There is now an opportunity to assess our current development and design controls to ensure apartments are well designed for future generations.

With the release of this discussion paper, the Victorian Government is seeking input from the development industry, design professionals, councils, apartment residents and the wider community about how to improve the overall standard of internal apartment amenity.

In particular, we want to know where or when any new guidelines should apply and how they should be implemented. The final product or outcome is also part of this discussion process.

## Building on recent engagement

Over the past few years the Office of the Victorian Government Architect has led a program of targeted stakeholder consultation on the amenity of apartments in Victoria.

This input has been invaluable in terms of helping to establish the scope of this discussion paper and will continue to inform thinking around apartment design and assessment. The Victorian Government is now keen to broaden the debate to involve the wider community and potential owners and tenants of apartments.

The issue of apartment amenity was also raised by local government, architectural and industry bodies, and the media during consultation on Plan Melbourne. This discussion paper brings together existing ideas and weighs up housing needs, market demands and building standards with an overall target of maintaining Melbourne's liveability.

## How you can participate

The Victorian Government will engage with a wide range of community, industry and other stakeholders including those who live in apartments.

We will be seeking your views on issues raised in this discussion paper through an online survey and submission form available at [www.delwp.vic.gov.au/better-apartments](http://www.delwp.vic.gov.au/better-apartments).

The 'Tell us More' boxes throughout this discussion paper are intended to encourage debate and will be a prompt for those answering the online survey and submission form.

## Scope

This discussion paper focuses on how we can ensure the spaces within an apartment match peoples' needs and expectations during different phases of their lives. The paper provides a summary of issues related to the design and amenity of apartments and what we can potentially do to make 'better apartments'.

In particular, the purpose of the discussion paper is to:

- Provide a context to apartment living and discuss key issues
- Focus on the internal design, amenity and functionality of apartments and apartment buildings
- Consider other issues that affect amenity for those living in apartment buildings.

Contextual factors also impact on the amenity of apartment residents, such as 'what is next door to the apartment building?' and 'how does this development impact on the public realm?' These are important considerations that often have implications for the internal amenity of apartments but they are not the primary focus of this discussion paper.

At this stage the discussion is centred on the amenity of all new apartments regardless of the number of apartments in a development or the height of a building.

## Implementation: getting the tools right

Any final product or outcome resulting from this discussion paper needs to be implemented in a practical way. There are several possible methods of doing this as shown in the table below.

Approach	Possible planning outcome
Regulatory based	Mandate minimum standards within planning schemes. Alternatively, or in addition, there may be a requirement to consider modifications to building regulations. This may also be in conjunction with design review and achieving design excellence.
Performance based	State Policy and Provision. Objectives, standards and decision guidelines (for variation to standards). A 'ResCode' for apartments. This may include an incentive based system (such as a 'code assess' framework) that helps to streamline the approvals processes.
Policy based	Revise Guidelines for Higher Density Residential Development document or similar guide to good practice with some standards and best practice. A reference document in the Planning Scheme.

Approach	Possible planning outcome
Market based	Customer focused with more information to buyers to allow them to compare products. Work with the market to encourage good design. An apartment buyers' or consumers' guide and a publication defining good design.

Any final product may include one or a combination of these approaches depending on the particular issue.

#### TELL US MORE

- What is the most appropriate implementation tool(s) for the Victorian context?
- What are the strengths and limitations of the various approaches?

## 3 Apartments and growth

### What is an apartment?

An 'apartment' or 'flat' is a dwelling that does not sit on its own parcel of land but is part of a larger building and typically has other dwellings above and/or below it.

An apartment building comprises several such dwellings. An apartment building can have other uses as well, such as retail or commercial premises, often on the ground floor.

The owner of an apartment dwelling holds the title for that dwelling only (and potentially an ancillary area such as a car space). The remaining areas such as the entrance foyer, lifts and communal gardens/open space are owned and managed by an owners' corporation.

An apartment building can be a low or mid-rise development and may contain only a handful of dwellings. An apartment building can also be a major, high-rise development with a large number of apartments. The ABS census defines low-rise apartment buildings as up to four storeys. Apartment buildings over four storeys are considered as mid or high-rise. There are numerous layouts and floor plates for apartment buildings depending on size, height and function.

New apartments are usually marketed to buyers based on the number of bedrooms they provide, typically one, two or three. Examples can range from less than 25 square metres for a studio to more than 250 square metres for a penthouse.

Studio apartments are characterised by a single, multi-use space and have no separate bedroom. They may have a bed that folds away and sometimes contain a sleeping area separated by a moving partition.

Student or serviced apartments may be invariably smaller than other apartments on the market and are designed to serve a particular purpose.

One, two or three bedroom apartments typically have separate bedrooms each with space for a double bed and clothes storage. Some apartments are split level with bedrooms and living areas connected by an internal staircase, sometimes with direct access to the street.

# Why do we need apartments?

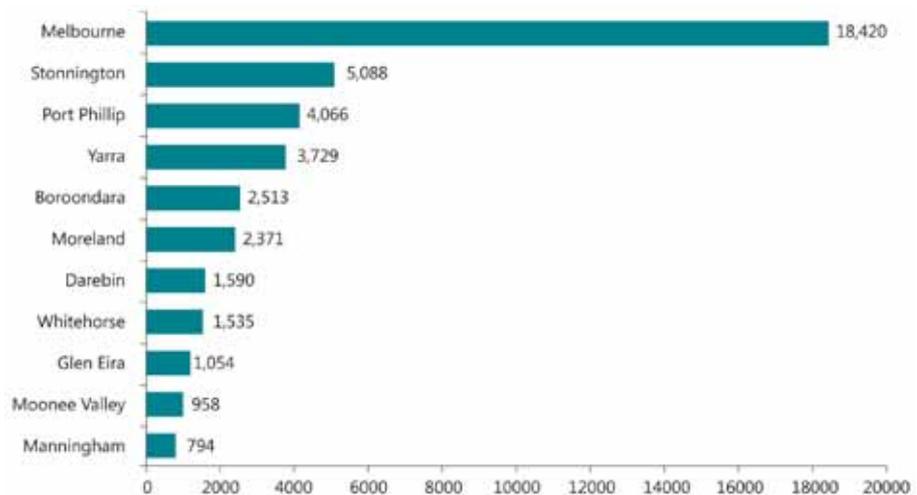
## Melbourne's apartment growth

Melbourne has experienced several periods in its history when large numbers of apartments were constructed. For example, between 1962 and 1974, the Housing Commission of Victoria built 45 high-rise blocks in the inner suburbs of Melbourne. While these periods of apartment growth added to the diversity of Melbourne's housing, up until recently the construction of detached housing dominated Melbourne's housing development.

Significant change in apartment construction occurred in the 2007-08 period when apartment development commenced a significant expansion. In 2001-07 average apartment approvals were around 4,000 annually. By 2010 this had grown to more than 10,000 approvals and by 2014 approvals were over 14,000, making up nearly one third of all housing approvals in Melbourne.

## Council areas experiencing growth

This apartment growth is not limited to Melbourne's Central Business District. Large numbers of apartments are being built in areas with established transport infrastructure, services and leisure facilities, consistent with longstanding state and local planning strategies such as *Melbourne 2030* that promoted urban consolidation.

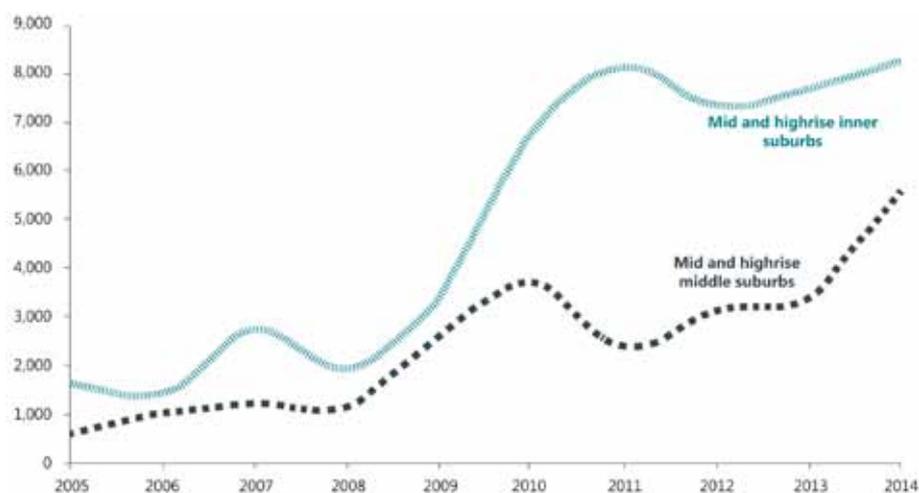


**Figure 2: Number of apartments in buildings of four storeys or more approved 2011-2014 inclusive**

(Source: ABS Building approvals, cat. No. 8731.0)

## Inner and middle ring suburbs – apartment demand

Increasingly, apartments are being built in the city's middle ring suburbs. This includes areas where before 2010 there were very few apartments such as Preston (where there are now around 1,000 apartments), Doncaster (970 apartments), Coburg (650 apartments) and Box Hill (630 apartments). Industry sources suggest the number of apartments marketed and built in Melbourne's middle ring is set to grow substantially.



**Figure 3: Annual number of building approvals of mid and high rise apartments in inner and middle Melbourne, 2001-14**

(Source: ABS Building approvals, cat.no. 8731.0)

## Size and variety

The ongoing development of new apartments in Victoria has raised questions about their size and variety. Based on a sample of 10,373 apartments that are currently either being marketed or constructed, 4,428 (or about 43%) are one bedroom apartments, most of which (72%) are between 41 and 50 square metres (Charter Keck Cramer report for the Department of Environment, Land, Water and Planning). Only a small proportion (7%) of single bedroom apartments are below 40 square metres.

There is more variation in the size of two bedroom apartments, which make up 52% of the apartments currently being marketed or constructed. Of these, 10% are 55 square metres or less; the majority are between 56 and 70 square metres; and 29% are 71 square metres or larger.

Only 5% of apartments currently being constructed or marketed include three or more bedrooms. This could mean that very few new apartments are suited to the long-term needs of households with children who tend to prefer more than two bedrooms.

## Apartments and housing affordability

The price of apartments tends to make them relatively affordable especially compared with detached and semi-detached dwellings. The current median price of a 46-50 square metre, one bedroom apartment is \$411,000. This is cheaper than 70% of detached houses and 58% of all existing units and flats sold throughout Melbourne in 2014. For suburbs closer to the CBD, the contrast between apartment prices and detached houses is even greater. Nearly 95% of houses in city fringe suburbs in 2014 sold for more than \$411,000 (Analysis of Valuer-General Sales Data).

## The apartment market is maturing

Between 2015 and 2017, Charter Keck Cramer predicts over 35,000 apartments will be built across Melbourne. Much of this will involve the intensification of former commercial, industrial and mixed-use areas.

As a city it is likely we are undergoing a permanent change in housing preferences equivalent to other cities internationally, where apartment living is much more common. This means that high levels of apartment development is likely to continue. Despite the recent growth in apartment living, Melbourne still has comparatively few apartment blocks relative to other international cities, which reflects the longstanding dominance of detached housing as the city's preferred housing.



**Figure 4: Proportion of dwellings in buildings of four or more storeys**

*(Source: ABS Census and various 2011-2013)*

## 4 Issues affecting apartment amenity

A shift towards more apartment living in Victoria, and an increase in apartment supply, has raised many issues that our planning system is still coming to terms with. Questions about apartment size, direct access to natural light and a perceived lack of housing diversity in new developments are just some of the issues raised. These and other issues are discussed below, along with the general impacts on residential amenity of living closer together.

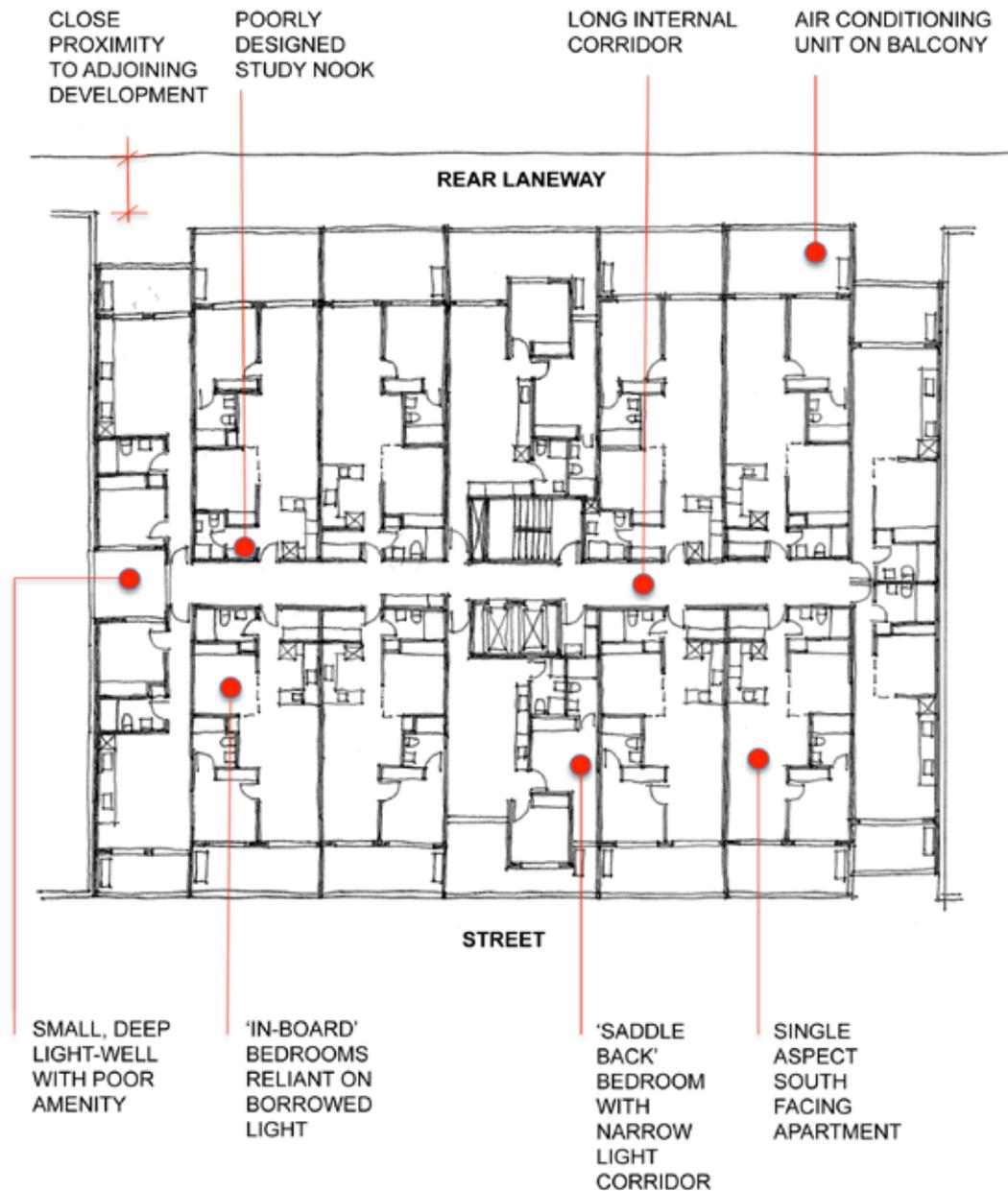


Figure 5: Upper floor plan of an apartment building.

## ISSUE

# 1

## Daylight

Issue	Potential impact	Relevant factors to consider
Lack of adequate natural light within the apartment	Quality of life Increased energy usage due to need for artificial light	Distance to neighbouring property Depth of apartment and distance to windows Height of ceilings Size and position of window in room Vertical position of apartment in building Reliance upon 'borrowed' light

Daylight is the natural ambient light available during the day. Access to daylight is important for people's health and wellbeing and also allows dwellings to be used and occupied without recourse to artificial lighting, thereby reducing energy consumption. Daylight is distinct from sunlight (see Issue 2).

The amount of daylight an apartment receives is primarily a factor of its orientation. Minimising the depth of apartments and maximising the ceiling height optimises daylight levels. The size and placement of windows is also important.

Many jurisdictions specify maximum apartment depths and minimum ceiling heights. Building separation is also important, especially in context with tower development.

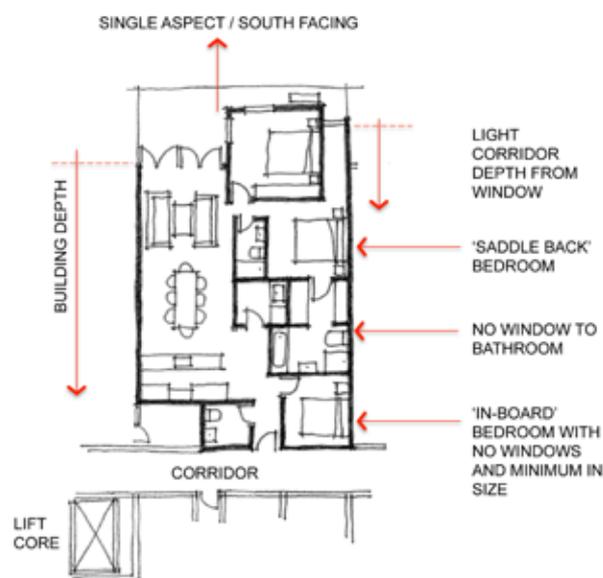


Figure 6: An example of a three-bedroom apartment with poor natural light.

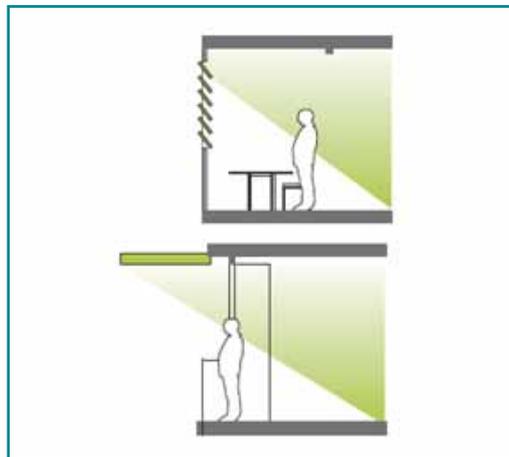
## 1

### TELL US MORE

- What spaces within apartments are the most important in terms of access to daylight?
- Do you think daylight should be required in secondary spaces such as corridors and bathrooms?

## Sunlight

Issue	Potential impact	Relevant factors to consider
Lack of controlled sunlight access to apartments	<p>Ability to enjoy warming sun</p> <p>Thermal comfort</p> <p>Increased energy use due to artificial light, heating and cooling</p> <p>Peak energy demand</p> <p>Climate change adaptation</p>	<p>Building/apartment orientation</p> <p>Apartment aspect(s)</p> <p>Building separation</p> <p>Size and height of windows</p> <p>External shading</p>



Sunlight is direct rays from the sun and provides radiant heat as well as light. It promotes health and psychological wellbeing and can significantly affect the thermal comfort of occupants. Managed well, sunlight can assist the passive heating of buildings in winter while avoiding excessive heat loads during summer.

The amount of sunlight an apartment receives, and the ability to control sunlight access, is primarily a factor of the orientation of its principal outlook. North facing dwellings receive the best access to sunlight and have the greatest opportunity to control this. South facing apartments receive little if any sunlight.

Providing for thermal comfort through the design of the building, rather than relying on mechanical services, can make the operation of buildings more resource efficient, reducing peak demand on energy infrastructure and improving resilience to climate change.

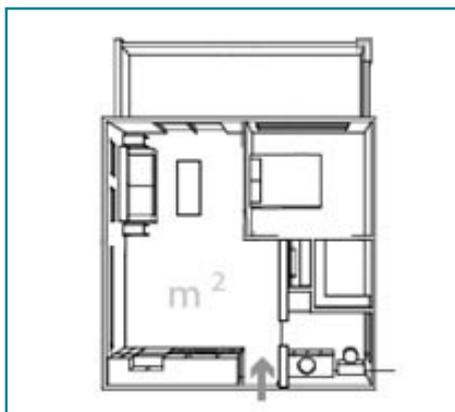
## 2

### TELL US MORE

- Should there be rules to ensure a majority of apartments receive sunlight?
- Are there other options that can provide for thermal comfort?

## Space

Issue	Potential impact	Relevant factors to consider
Apartments are too small or poorly planned	Household diversity Internal amenity Flexibility of use Inadequate storage	Apartment size Apartment layout and flexibility Ceiling heights Storage (built in and external)



Ceiling height and floor area together determine the spatial quality of an apartment. The rooms inside an apartment need to be large enough and of the right proportions to accommodate the uses for which they have been intended. There also needs to be appropriate storage to allow people to live comfortably. Different households will have different space requirements that will change over time. Families with children will have different needs to single person households.

It is common to stipulate minimum floor areas for apartments with different numbers of rooms. Several Australian state and local governments have set minimum apartment sizes for one, two and three bedroom apartments.

As a type of housing, apartments have historically catered to demand for smaller dwellings in cities. Studio apartments, where there are no separate rooms other than a bathroom, can be quite small but are typically more reliant on clever spatial planning to work well.

In order to cater for a range of households over time, and to build a diverse and resilient stock of housing, some jurisdictions also stipulate a proportion of different types and sizes of apartment within a development.

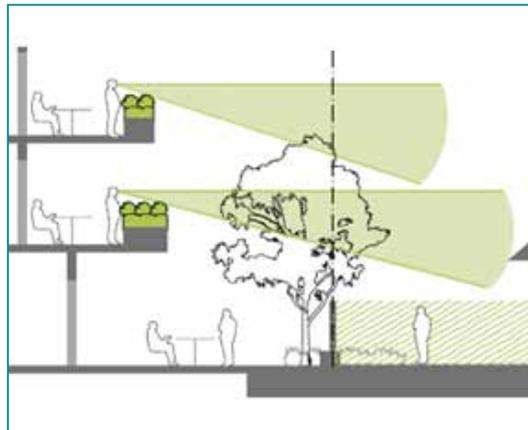
### 3

#### TELL US MORE

- Do we need to set minimum apartment sizes in Victoria?
- Do we need to increase minimum ceiling heights for apartments in Victoria?
- Should larger developments be required to include different types of apartments catering to different types of households?

# Outlook

Issue	Potential impact	Relevant factors to consider
Achieving a quality outlook from all apartments	Quality of life Surveillance of the street Privacy of neighbours Privacy of resident	Apartment orientation and aspect Distance to your neighbour Relationship to street and other public spaces Future development on adjacent sites



Outlook is different to view. A view is a wonderful asset for any apartment that has one, but access to a view cannot be guaranteed. An outlook is an essential connection between the interior of an apartment and the world outside. It provides an opportunity for daylight and sunlight to enter a home, for ventilation, and also a sense of visual relief and connection to the street and external environment.

Providing an outlook has to be balanced with ensuring a reasonable level of privacy to the occupants of apartments and adjacent buildings. Considering the orientation of buildings and the layout of dwellings can help maximise outlook and minimise direct overlooking into habitable spaces and private open spaces.

Where apartments face one another, a certain degree of separation is required so that each can enjoy their shared outlook, without the occupants of either feeling as if they are intruding upon one another’s privacy. For tower buildings, this separation needs to be greater, as apartments facing one another feel closer together than those with a stronger sense of connection to the ground. For tower buildings, it may also be important to ensure the outlook of living areas is not solely directed at an adjacent tower.

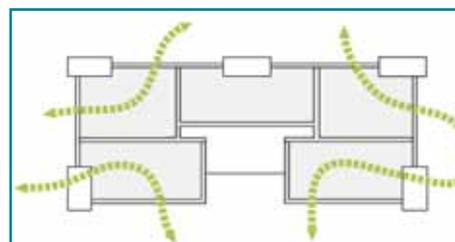
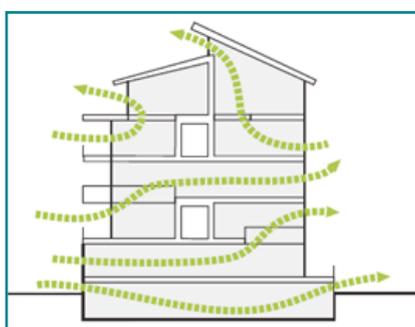
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**TELL US MORE**

- What are the essential qualities of a good outlook?
- Should living spaces be treated differently to other spaces within an apartment in regard to outlook?

## Natural ventilation

Issue	Potential impact	Relevant factors to consider
Lack of adequate natural ventilation of apartments	Health and wellbeing Thermal comfort Increased energy loads for heating and cooling Internal air quality and condensation	Operable windows to outside for all habitable rooms Room depth and relationship to ceiling height (to achieve effective air change) Cross ventilation (dual or multiple aspect) Ability to control air movement Size and position of windows in rooms



Ventilation is the movement of air through the rooms of a dwelling, or the rate of air change. This affects air quality, which is important for health and wellbeing. Where ventilation can occur by natural means and be controlled by the occupant, this can reduce energy consumption and aid thermal comfort.

Apartments with more than one aspect can be cross-ventilated. This enables a good rate of air change and offers the greatest opportunity to control natural ventilation and achieve cooling breezes in summer. Some states require a proportion of apartments in any developments to be naturally cross-ventilated.

Apartments with only one aspect are more difficult to ventilate well. Not making apartments too deep or ceilings too low, providing an operable window in each room, and maximising the width of the aspect is the best way to optimise natural ventilation in such cases.

Light wells are sometimes used to provide cross-ventilation where it might not be achieved otherwise. For light wells to be effective, the ratio of the minimum width to overall height must not be too great. Taller light wells need to be connected to the outside environment at the bottom if they are to be effective for ventilation.

## 5

### TELL US MORE

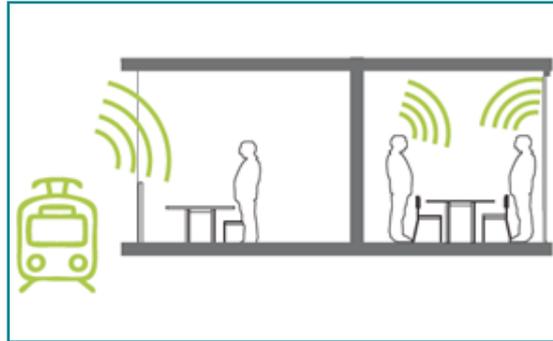
- How can access to fresh air in an apartment be improved?

## ISSUE

# 6

## Noise

Issue	Potential impact	Relevant factors to consider
External noise Acoustic privacy	Sleep disturbance Health and wellbeing Privacy	Façade design Building orientation/internal planning Proximity to noise source (principally transport related)



Living closer together requires the planning and design of buildings to be carefully considered to maintain personal privacy and support the function and benefit of the home as a place of refuge. A reasonable degree of acoustic privacy is one aspect of this. The National Construction Code (NCC) addresses the issue of noise transfer between apartments in a building.

In addition, high levels of external noise, especially traffic, if not mitigated, can interrupt sleep and affect health outcomes. This issue is not addressed in the NCC but all other mainland states require apartment developments to be designed to manage the impact of traffic noise on future occupants. This typically occurs through the planning system.

With a large amount of new apartment development in Victoria focused around transport nodes and corridors and in Activity Centres, the potential impact on apartment occupants of noise from external sources, such as major roads, is an important issue.

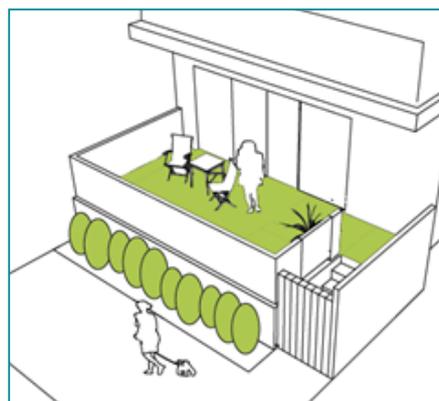
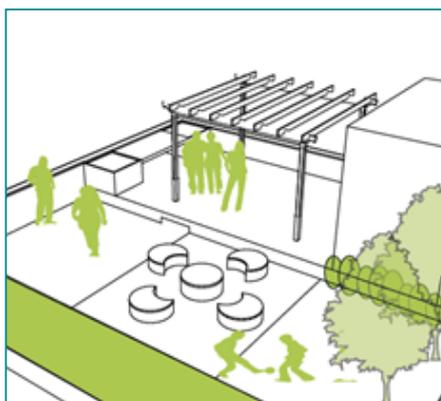
## 6

### TELL US MORE

- Are you aware of any major issues relating to noise transfer between apartments?
- What are the main sources of noise that can impact apartment occupants?

## Outdoor space

Issue	Potential impact	Relevant factors to consider
Access to outdoor spaces from apartments	Quality of life Social interaction and safety Household diversity (especially households with children) Noise	Balcony provision and size Sunlight and wind Landscaped roofs Distinction between private, communal and public outdoor space Tree planting



There are different types of outdoor space in apartment developments. Individual apartments can have access to private outdoor space, typically in the form of balconies. Balconies and ground floor courtyards can be useful as an outdoor extension of the living space and for simple outdoor activities such as growing plants, storing personal outdoor items and drying clothes.

Outdoor space can also be provided for the use of all residents and be landscaped in various ways. This would be a shared ongoing cost within a body corporate. Common outdoor areas might sit above a car park, on a podium or rooftop, or be part of the natural ground of the site.

Considered in conjunction with built form, the location, amount and experiential qualities of on-site open space can impact significantly on residential amenity and the performance of buildings. On-site open space is likely to work best when it is integral to the development and not just the residual or 'undevelopable' site area.

## 7

### TELL US MORE

- What types of shared outdoor spaces do you think apartment developments should provide? (e.g. play spaces, roof terraces, productive gardens, swimming pools)
- Should all apartments have balconies?
- Is the size of a balcony important to you?
- Is it acceptable for air conditioning units to be located on apartment balconies?

## ISSUE

# 8

## Adaptability

Issue	Potential impact	Relevant factors to consider
Apartment buildings will last a long time but are difficult to modify once built	Future value and use Sustainability	Size and layout of apartments Ceiling heights Flexibility of building floor plate

Apartments built today will exist for many years to come. It is important new development makes a lasting and valuable contribution to the city.

While it is impossible to foresee and accommodate all eventualities, apartments that can more easily be re-organised or renovated in the future, in response to demographic shifts or changes in living preferences, are ultimately more sustainable.

Sometimes it might be desirable to change the use of certain parts of a building, between residential and retail. For example, to convert service areas such as car parks to more active uses, or to convert smaller apartments into family dwellings. All these possibilities are easier to accommodate if considered from the outset.

## 8

### TELL US MORE

- Should buildings be designed to be adaptable in future?
- Should certain floors be designed for a variety of uses?
- What are the important features of adaptable buildings?

# Landscape

Issue	Potential impact	Relevant factors to consider
Intensive urban development affects the landscape	Climate change mitigation and adaptation Urban heat island effect Ground permeability and stormwater management Quality of public realm	Natural landscape context Tree canopy protection/provision Deep soil planting Water Biodiversity Potential for roof gardens



As we develop sites more intensively there is an impact on both the natural environment and the quality of the urban environments we construct.

Consideration of the natural landscape as an essential and integral component of the development site can greatly improve a building’s environmental performance while also creating unique places that are pleasant to inhabit.

Retaining areas of natural ground – deep soil zones – throughout urban settlements is a part of maintaining and restoring the benefits provided by tree cover and a permeable ground plane. For example, these benefits could include providing shade to apartments on lower levels, enhancing on-site and streetscape amenity, and reducing surface water runoff.

9

**TELL US MORE**

- Should all apartments require some form of landscaped area?
- Should this vary for low, medium or high rise buildings?

## Universal design

Issue	Potential impact	Relevant factors to consider
Apartments are not suited to people of all ages and abilities	Household diversity Social equity Accessibility	Ageing population Children in apartments Movement and access Size and layout Adaptability



Universal design is about making the built environment work well for everyone, regardless of age or ability. It enables equitable use and flexibility in use. Movement and occupation should be simple, intuitive and afforded adequate size and space.

Adopting universal design principles more broadly throughout our built environments will better support the needs of our ageing population.

Liveable Housing Australia (LHA) is a national not-for-profit organisation that promotes universal design in housing. LHA has developed design guidelines and a rating system for the application of universal design to housing. This could form the basis for a requirement that a proportion of apartments in all or certain developments must meet specified universal design standards.

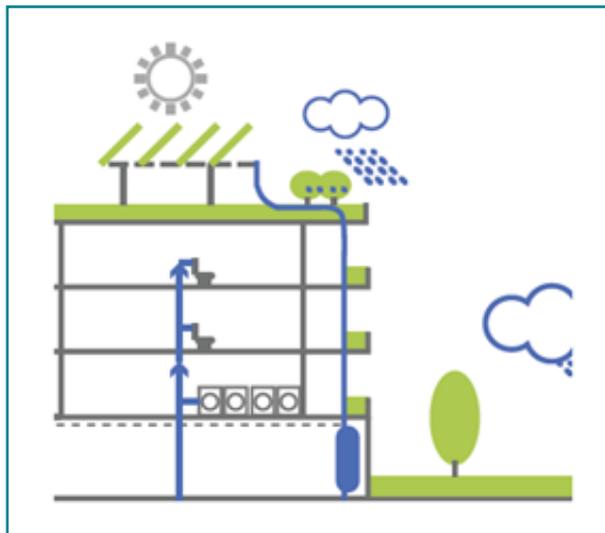
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### TELL US MORE

- Should all apartments, or a percentage of apartments, be designed for everyone, regardless of age or ability?

## Energy and resources

Issue	Potential impact	Relevant factors to consider
Design of apartment buildings affects household energy and resource consumption	Climate change mitigation and adaptation Thermal comfort Whole-of-life cost	Orientation Natural light and ventilation Façade design Material selection Building systems Individually metering for services



Environmentally sustainable design principles such as passive design can help households consume less energy and assist with the transition to a less resource-intensive built environment.

The construction industry is a major consumer of energy and resources but the operation of a building across the whole of its life is typically even more resource intensive. Much can be done in the planning and design of apartment developments to minimise consumption and optimise resource and energy use, both during construction and through the life of a building. For example, the individual metering of apartments helps to incentivise reduced consumption of natural resources.

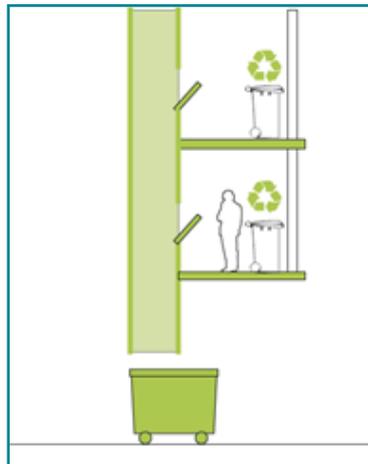
### 11

#### TELL US MORE

- What environmental issues are important to residents?
- Should every apartment have individual metering of their utilities (e.g. gas, electricity, water)?
- Should all apartments be required to meet a minimum industry standard in addition to the building regulations?

## Waste

Issue	Potential impact	Relevant factors to consider
Household waste management is reliant on building-wide systems	<p>Amount of waste sent to landfill</p> <p>Excess of organic waste in landfill</p> <p>Increased consumption through lost recycling opportunities</p>	<p>Space for sorting and recycling waste</p> <p>Waste collection logistics</p> <p>Opportunities for recycling organic waste on site</p>



The amount of waste generated in apartment buildings in Melbourne is growing with the rise in apartment numbers. Waste management in apartment developments can have negative impacts on amenity, health and safety. This can include noise from use and collection of bins, odour, litter and dumped rubbish, and bins left in public thoroughfares and streets.

Apartment developments often have low resource recovery rates compared to single dwellings. This can be due to a lack of access for residents to recycling infrastructure and services. The planning system may have a role to play in achieving better design and facilitating improved resource recovery systems for new apartment developments.

Waste management systems often work most effectively when dedicated storage areas are provided for the separation, collection and recycling of waste, with easy access for all building occupants and waste collection contractors. Where opportunity exists for on-site facilities for composting and green waste reuse, this can minimise the volume of organic waste sent to landfill. It is important that apartment occupants have the opportunity to participate in sustainable waste management practices within the building.

## 12

### TELL US MORE

- How should waste be collected from apartment buildings?
- Should sorting facilities be provided for recycling and where?

## Car parking

Issue	Potential impact	Relevant factors to consider
Impact of on-site car parking provision on building design	Public realm and pedestrian amenity Loss of interaction with streetscape due to podium (above ground) car parking Noise and air pollution Visual impact of podium car parks	Active and sustainable transport use Convenience, security, safety and accessibility Ventilation Maximum rates and car-share schemes Underground versus above ground parking Floor to floor heights and ability to retrofit Safe, secure bicycle parking Visitor parking

Car parking can have a significant impact on streetscape amenity, building form and the cost of apartment developments and it must be considered at the outset of the design process. The building footprint required for car parking frequently results in full site coverage with excavation reducing natural ground landscaping opportunities. Where excavation is not feasible, multi-storey car parks above ground (often referred to as podium car parks) can impact the level of surveillance and function of the street. Another consideration is that car parking often requires mechanical ventilation or mechanical car parking stackers.

Apartments located in close proximity to public transport or car share schemes can potentially provide fewer and sometimes even no car spaces. This can free up the planning of the site and enable more on-site open space and natural ground planting. It can also provide greater opportunities for pedestrian and occupant engagement at street level.

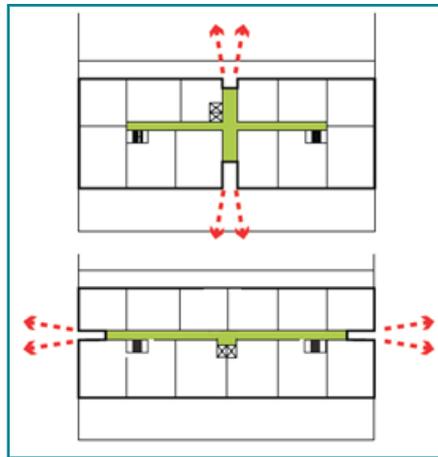
13

### TELL US MORE

- How important is a car space in an apartment?
- Can alternatives to car parking provision offer improved solutions? If so, what?

## Entry and circulation

Issue	Potential impact	Relevant factors to consider
Poorly-defined entrances Inactive building frontages Long internal corridors	Poor security or sense of address Poor internal amenity Visibility and safety	Number of dwellings per floor per core Incidental stair use to encourage active living and reduced energy consumption Natural light and ventilation to circulation spaces Management of residential mail Residents moving in/out Trade access for repairs and renovations



The experience of approaching and entering a building and arriving at an apartment can make an important contribution to the amenity of residents and visitors. Whether arriving by bicycle, car or as a pedestrian, the experience of moving through the building and the sense of safety and ease of use are all factors that need to be considered.

Residents continually moving furniture in and out of their apartments can put pressure on a building's circulation and access systems, especially in larger developments. As apartments age and require repairs, retrofitting or renovation, access for maintenance and building trades is another issue that can be difficult to manage.

## 14

## TELL US MORE

- Should designated areas be provided for on-site loading?
- Should apartment building lobbies be clearly visible from the street?
- Should internal corridors have views out and provide daylight?

## 5 Context

### What happens in Victoria and elsewhere?

#### Victoria's state planning requirements

The *Victoria Planning Provisions*, within every planning scheme, address design and amenity issues for medium density housing development up to four storeys (Clause 55). Residential development higher than four storeys requires consideration of the *Guidelines for Higher Density Residential Development* (DSE 2004) (Clause 15.01-2) and an Urban Context Report and Design Response (Clause 52.35).

#### Residential development up to four storeys – Clause 55 ('ResCode')

Clause 55 addresses issues about neighbourhood character, building form, site layout and building massing, amenity impacts and on-site amenity, and facilities for medium density housing development of up to four storeys.

It encourages residential development that provides reasonable standards of amenity for existing and new residents by addressing issues relating to overlooking, daylight, solar access, overshadowing and noise. Both on-site and off-site dwelling amenity related objectives and standards are provided that address daylight, solar access, views into neighbouring and on-site properties, noise and storage facilities.

#### Guidelines for higher density

The *Guidelines for Higher Density Residential Development* (DSE 2004) are a statewide planning tool for apartment development of four storeys or above across Victoria.

The Guidelines are intended to help assess the design and built form of residential development of five or more storeys. They provide better practice design advice to developers, councils and communities with the aim of promoting high quality public and private amenity and good design in higher density residential development. However, they do not establish compulsory standards or stipulate apartment sizes.

The Guidelines are structured around six elements of design consideration with a focus on built form:

- Urban context
- Building envelope
- Street pattern and street-edge quality
- Circulation and services
- Building layout and design
- Open space and landscape design.

Under each element there are general design objectives.

## What other controls apply?

With the exception of some local controls there are generally no density controls (e.g. floor space ratios or dwelling densities) on sites where multiple housing is a permitted use in Victoria. This has an effect on apartment design and potentially contributes to amenity issues. Other Australian states have primary development controls on sites zoned for apartment development and also regulate at least some aspects of apartment design through their planning systems.

In Victoria, the National Construction Code (NCC) provides the principal regulation governing the design and amenity of apartments. More details are provided in the next section.

## Other Victorian examples

Some Victorian councils have developed their own approaches to addressing apartment design issues. The City of Moreland has drafted its own local standards for residential development to improve the internal amenity of housing in its municipality. The City of Maribyrnong has developed a checklist and rating tool that assists proponents and assessors to deliver better neighbourhoods, streetscapes and homes.

The City of Melbourne has raised the subject of improving the design quality of apartments in *Future Living: a discussion paper identifying issues and options for housing for our community* (May 2013). An extensive community consultation process and the release of the draft Housing Strategy, *Homes for People*, followed this paper.

## National examples

Many national and international cities have planning policy guidance for the development of residential apartment buildings to achieve high quality living environments and housing choice. The range and types of tools and controls vary within different jurisdictions.

Australian jurisdictions, in particular New South Wales, Canberra/ACT, South Australia, Queensland and Western Australia, provide planning guidance on apartment building design and amenity with specific measurable standards.

For example, in New South Wales, the *State Environment Planning Policy 65 – Design Quality of Residential Flat Development* (SEPP 65) applies to three or more storeys and four or more self-contained dwellings and is accompanied by the *Residential Flat Design Code* (2002). The NSW apartment design framework is currently under review.

## Victorian building system

The object of the *Building Act 1993* and the Building Regulations 2006 is to protect the safety and health of people who use buildings.

The Building Regulations 2006 adopt the National Construction Code (NCC) which contains the minimum standards for the design and construction of buildings and other structures, covering such matters as structure, fire resistance, access and egress, services and equipment, energy efficiency as well as some aspects of health and amenity.

The NCC covers some issues relevant to the current debate about the design quality of apartments, including room heights, natural light, ventilation, sound insulation and energy efficiency. However, these NCC standards are minimum requirements and it would be worthwhile considering whether they are sufficient to meet peoples' amenity expectations within an apartment.

NCC Deemed-to-Satisfy Provisions	
Room heights	<ul style="list-style-type: none"> <li>• kitchen – 2100mm</li> <li>• habitable room – 2400mm</li> <li>• corridor/passageway – 2100mm</li> <li>• bathroom, laundry, storeroom – 2100mm</li> </ul>
Natural light	<ul style="list-style-type: none"> <li>• windows – min. 10% of floor area + open to sky, face a courtyard or other space open to sky or an open verandah, carport or the like</li> <li>• roof lights – min. 3% of floor area + open to sky</li> <li>• a window required to provide natural light that faces a boundary of an adjoining allotment or a wall on the same allotment must not be less than a horizontal distance from that boundary or wall that is the greater of 1m or 50% of the square root of the exterior height of the wall in which the window is located, measured in metres from its sill.</li> <li>• borrowed light is permissible, subject to specified window-floor area ratios</li> </ul>
Ventilation	<p>Ventilation must be provided by windows, doors or other openable devices:</p> <ul style="list-style-type: none"> <li>• with opening size min. 5% of floor area</li> <li>• open to: <ul style="list-style-type: none"> <li>- a suitably sized courtyard or space open to the sky</li> <li>- an open verandah, carport or the like</li> <li>- an adjoining room (i.e. borrowed ventilation) in which case the ventilating area of the opening in the adjoining room must be 5% of the combined floor area of both rooms</li> </ul> </li> </ul>
Sound insulation	<p>Minimise the sound transmission through floors and walls separating sole-occupancy units, and separating sole-occupancy and certain types of space.</p> <p>Does not cover sound generated outside a building or sound escaping from a building and re-entering via an external element.</p>

## 6 Summary and feedback

### Summary

There has been a great deal of discussion around apartment design and amenity in Victoria in recent years. For this reason, it is important for the Victorian Government to take the lead and guide and inform the debate to achieve the best outcomes for the state as a whole.

This discussion paper provides an important first step to introduce some of the key issues we are facing regarding apartment amenity. It also seeks input on what changes we could make to improve the planning system.

A high level of skill is required to design a good apartment development but there needs to be a balance between good design principles and achieving a financially viable project that meets our housing needs now and into the future. Any change to the planning system has implications that could be felt by developers, buyers and residents. However, as a community we have an obligation to ensure all new apartments are liveable and sustainable and meet the needs of all occupants over the life cycle of a building.

The Victorian Government is committed to setting up a framework for discussion to achieve better apartment amenity. What that ultimately looks like is up to you.

### Feedback and opportunities to participate

You are encouraged to participate in the discussion about better apartments through an online survey and submission form available at [www.delwp.vic.gov.au/better-apartments](http://www.delwp.vic.gov.au/better-apartments).

The Victorian Government will also run a series of forums and workshops to engage with the community, local councils and industry. The timetable for our consultation process is outlined below.

Release of discussion paper	May 2015
Online survey and submission form	End of May to end of July 2015
Stakeholder consultation – forums and workshops	July to August 2015
Develop and analyse options for consideration	September to December 2015

Updates about the consultation process and other ways of participating will be available at [www.delwp.vic.gov.au/better-apartments](http://www.delwp.vic.gov.au/better-apartments).

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