

**Submission
No 50**

INQUIRY INTO APARTMENT DESIGN STANDARDS

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Submission to Victorian Parliamentary Inquiry into Apartment living standards

TOR 1: Examine current apartment living standards in Victoria

TOR 2: Investigate improvements for apartment liveability in building developments including communal areas

TOR 3: Look at initiatives undertaken by other states or nations that have improved apartment design standards

Submission by Dr Tom Alves

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1 Introduction and background

I welcome this opportunity to provide a submission to the Victorian Parliamentary Inquiry into Apartment Living Standards.

I am currently the Head of Development at the Australian Housing and Urban Research Institute (AHURI). In this capacity, I have overseen the preparation of a separate submission to the Inquiry, based on AHURI research evidence.

Previously, I worked in the Victorian Department of Premier and Cabinet (2009-2016), at the Office of the Victorian Government Architect, and was Acting Director of the Victorian Design Review Panel during 2016. While in these roles, I led the development of the Victoria's Better Apartment Design Standards.

In 2013, I was seconded by the Ministerial Advisory Committee leading the development of the Metropolitan Planning Strategy (Plan Melbourne), to be the Lead Author of the Housing Chapter for Plan Melbourne. In that role, I drafted the Initiative that was included in the published edition of Plan Melbourne, to develop and introduce design standards for apartments in Victoria.

The present submission draws on these experiences.

In addition to the above, other professional background of relevance to my submission to the Inquiry includes:

- I was part of the Working Group that established Nightingale Housing as a not-for-profit company to deliver sustainable, and more affordable, high quality apartment developments
- I co-authored the 2015 report, *Making Apartments Affordable: Moving from Speculative to Deliberative Development*, which analysed the financing of apartment development and its implications for affordability and quality
- Since 2013, I have delivered an annual guest lecture about the design and provision of apartments to students in the Master of Construction Management program at RMIT's School of Property, Construction and Project Management
- While employed at The University of Melbourne (2016-2018), I wrote and coordinated the subject, *Housing: Markets, Policy, and Planning*, as an elective in the Master of Planning program, and led Design Thesis Studio classes about apartment design for students in the Master of Architecture program
- My own PhD thesis (2007), *Managing Medium Density Housing Development: A Municipal Case Study*, examined the governance of medium density housing provision in metropolitan Melbourne
- I worked previously (1996-2000) in architectural design practices in Sydney, alongside practitioners who were involved directly in developing the apartment design and planning requirements that subsequently informed the development of NSW SEPP 65

I would be willing to provide further evidence to the Inquiry, should this be required.

This submission is based on:

- My direct experience of the process of developing the Victorian Better Apartment Design Standards over the period 2012-2017
- Extensive engagement with senior government officials, local governments across Victoria, and industry practitioners and peak bodies during this time
- Evidence gathering and research conducted as part of the development of the Better Apartment Design Standards in Victoria, including:
 - Targeted engagement with specialist technical experts about building acoustics, the physics of daylight, the thermal performance of buildings, ventilation, accessibility, public health, landscape environmental services, waste management, water management, and building energy use
 - Close analysis of the planning regime for apartment standards in NSW (identified in the 2011 COAG Reform Council review of metropolitan planning systems in Australia as representing national best practice), including direct engagement with key individuals involved in the 2012 review of SEPP 65
 - Desktop analysis of apartment standards from other international jurisdictions
- Academic research concerning the provision of apartments and other forms of medium density housing

1.1 Apartments

For this submission, an apartment is defined as a residential 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.

Victoria, especially greater Melbourne, has experienced an unprecedented level of new apartment supply over the last fifteen years. Historically, however, apartments have not been a significant component of either existing or new housing stock.

1.2 Development control and apartments

Prior to the introduction of the Better Apartment Design Standards in 2017, the Victoria Planning Provisions (VPP) did not address specifically issues that pertain to the design, amenity, or performance of apartments.

- The VPP (in Clause 55) did address design and amenity issues for medium density housing development up to four storeys. This was intended to apply to medium density housing types, such as town houses, terraces, and semi-detached dwellings.
- Originally, Clause 55 applied to residential development of two or more dwellings on a lot, up to three storeys.
- The application of Clause 55 to four-storey development was a later innovation. Development included as a result of this change was typically low-rise apartment buildings.
- This helped to protect the amenity of third parties living adjacent to new apartment development of four or fewer storeys but often resulted in perverse outcomes for the design and amenity of the apartments themselves.

- For residential development higher than four storeys, the VPP (Clause 52.35) required an Urban Context Report and Design Response. The requirements of Clause 52.35 concerned issues of built form and urban context, not the design of housing within a development.
- Meanwhile, Clause 52.06 contained car parking provisions that applied to all dwellings and Clause 52.34 the provision requirements for bicycle parking.
- The Guidelines for Higher Density Residential Development (GHDRD) was a referenced document in the VPP that provided guidelines to help apply the Urban Design Principles in Clause 15 of the SPPF to the design of larger residential buildings. It also contained a section on building layout and design but had the status of a guideline only.

Before the introduction of the Better Apartment Design Standards in Victoria, the National Construction Code (NCC) was the only regulation governing the design and amenity of apartments. The NCC requirements for Class 2 buildings (i.e., apartments) contain provisions relating to room heights, natural light, ventilation, sound insulation (noise transfer) and energy efficiency.

- Other Australian States regulated at least some aspects of apartment design through their planning systems.
- New South Wales (NSW) has the most comprehensive approach to apartment design of any Australian planning system, addressing many issues of amenity and performance, as well as procedures for design verification and assessment.
- In Victoria, the previous absence of statutory planning controls meant the quality and amenity of apartments and the performance of apartment buildings was impacted strongly by the market drivers of the development process. Such drivers are frequently in tension with and often antithetical to whole-of-life and use values.
- In particular, the absence of site density controls (e.g., Floor Space Ratios or dwelling densities) on sites where multiple housing is a permitted use in Victoria exacerbates apartment design problems.

In developing design standards for better apartment development in Victoria, the principal questions that guided the process were:

- What are the main issues a planning intervention would need to address?
- What is the best way to implement this within the Victorian planning system?
- What possible unintended consequences could this type of intervention have and how might these be addressed?

2 Apartment design issues

The design of apartment buildings can affect a wide range of different but related issues, including:

- the amenity of the apartments
- the performance of the building (on a range of measures)
- urban design and amenity outcomes
- property rights and development assessment processes
- strategic urban planning outcomes

The following is a comprehensive catalogue of apartment design considerations, categorised according to the issues they affect. In the case of residential amenity issues, the relevant building design features/ considerations are also indicated.

2.1 Primary amenity issues and related building attributes

- Daylight (apartment depth, ceiling height, building depth, window size/location, space beyond apartment open to the sky)
- Sunlight (apartment orientation, aspect)
- Natural ventilation (building footprint/ depth, dwelling aspect, window location, apartments per floor/ floor layout)
- Space (apartment size and ceiling height, storage provision, apartment layout, room sizes)
- Balancing outlook and privacy (separation between facing apartments, aspect)
- Internal noise reduction (façade design)
- Thermal comfort (orientation, façade design, external shading and its operability)
- Outdoor spaces (balconies, on-site open space)
- Arrival and circulation (entrances, number and location of cores, accessibility of stairs, length of corridors, natural light and ventilation)

2.2 Building performance issues (and related strategic urban issues)

- Resource and energy consumption (climate change adaptation and mitigation)
- Deep soil landscape (ecosystem services, site permeability and stormwater management, urban heat island effect)
- Universal/ accessible design (diversity, equity, accommodation an ageing population)
- Waste management (reduce waste sent to landfill, organic waste management)

2.3 Built form and urban design issues

- Responsiveness to place and context
- Building scale, typology and form
- Wind effects on urban realm amenity
- Overshadowing (of other dwelling and public spaces) and overlooking
- Street interfaces, streetscape design and street activation (with implications for public realm amenity and safety)
- Service access and infrastructure (both ease of access and impact upon the amenity and safety of the public realm)
- Contribution to urban form that encourages active transport and social connection

2.4 Development assessment issues

- Equitable development rights on adjoining properties
- Prioritising and balancing residential amenity issues with other outcomes on particular sites
- Tension between permissible development densities/ planning envelopes and achieving a built form that supports effective amenity and performance outcomes
- The inherent complexity of multi-residential development, which necessitates robust qualitative assessment balanced with a consistent and efficient process

2.5 Other strategic planning and policy issues

- Equitable access to urban amenities, services, and social infrastructure
- Provision of affordable housing
- Dwelling diversity at the local and regional scales
- Building adaptability and sustainability of urban region over time

3 Key physical design components for good apartment living standards

The following is a summary of the design issues involved in achieving good living standards in an apartment development, insofar as these pertain to an individual apartment building in its context. Good living standards also require equitable access to amenities and services in the wider urban environment.

- Ideally, an apartment should have at least two aspects (i.e., external walls facing in at two directions) to facilitate good ventilation and daylight access to all rooms.
- Where an apartment has only one aspect (i.e., external wall facing only in one direction), this should be greater than the depth of the apartment for the same reasons.
- A northern aspect is best as this offers the greatest potential for sunlight access that can be controlled to optimise passive thermal performance, improving comfort, and reducing energy consumption and running costs.
- It becomes difficult to achieve the above outcomes where there are more than five apartments on the floor of a building sharing the same vertical circulation, and very difficult when this number exceeds eight.
- To allow solar access and provide depth of outlook, apartments also require a suitable level of separation from other buildings.
- Where apartments face onto one another, this separation also needs to take account of privacy. Distances of less than about twelve metres between the main (and often the only) frontages of facing apartments are likely to feel uncomfortable for occupants.
- Where apartments are located in tall towers, the loss of reference to the ground plane means apartments facing one another feel closer than they are, and greater separation distances can be required to maintain a balance between privacy and outlook. This separation also aids with providing daylight access to apartments closer to the ground.
- Entering a building and moving through it to arrive at a particular apartment home needs to be a straightforward experience and to feel pleasant and safe.
- Circulation spaces and other common areas of a building also benefit from natural light and ventilation.
- Apartments need to be big enough to accommodate the normal domestic needs of the occupants, including for storage.
- Space for domestic activities that are best performed outdoors also needs to be provided, whether this is associated with the individual apartment or is provided collectively on the site.
- A meaningful connection with the environment outside the home is important for health and wellbeing. Where apartments have a single or limited aspect, the importance of the quality of this interface and how it is designed is heightened.
- Important issues in the design of the interface between the home and its external environment include attenuating external noise, managing solar access, and

striking a balance between creating a sense of enclosure and providing opportunity for engagement with the public realm (such as the street).

To achieve these requirements in an apartment development, different apartment typologies have been developed and built historically in different cities at different times to provide housing for urban populations.

In Victoria, the development economics of apartment supply, when combined with other relevant local factors, such as:

- a history of low-density urban form and an inherited pattern of land subdivision consistent with this, and
- a planning regulatory system not well equipped to deal with contemporary urban development issues and processes

has worked against the delivery of these outcomes for apartment residents, resulting range of amenity issues and necessitating a regulatory response.

4 Factors influencing living standards in apartments through the development process

Apartment development involves the creation of multiple property rights out of a single property right. This process is expensive and carries significant risks. While it can also be highly profitable, the return on investment is not realised until the very end of the process. To manage development risk and secure a profitable return for the project's equity investor(s), development proponents look to maximise the total dwelling yield from any development site.

Once development consent is obtained, pre-sale contracts are used to demonstrate that a market exists (and to secure development finance) for the apartments. In recent years, favourable conditions for property investment have meant that this has tended to be an investment rather than an owner-occupier market. In this market, more and smaller apartments have delivered a better rate of overall return than fewer or larger ones, at least in those locations where a market exists at all.

In general, and especially in the continued absence of site density controls in Victoria,

- The result has been a supply of primarily smaller (1 and 2 bedroom) apartments and a substantial number of single aspect apartments, in buildings with large floor plates that maximize the development area of the site.
- Most apartment developments occur on 'infill' sites (re-zoned existing property titles, originally created to serve other land uses or lower residential densities) so the site configuration or pattern of subdivision is often not optimal for apartment buildings.

The prevailing outcome, therefore, has been deep-plan, single-aspect apartments with poor daylight access, limited natural ventilation, compromised outlook, and cramped or inefficient floor plans.

Pre-existing planning controls in Victoria, primarily concerning the built form of development, typically sought to manage the impacts of development on external third parties and the public realm and did not address resident amenity and other issues associated with the building's performance.

Although the Better Apartment Design Standards have attempted to address the residential amenity of apartments more effectively, a very large number of apartments were developed in the central area of metropolitan Melbourne prior to their introduction, and these will be very difficult to retrofit due to dispersed ownership.

4.1 Wider implications¹

Despite the low-density form of Australian cities, metropolitan planning policies have long supported urban consolidation and residential densification, with the objective of achieving a more sustainable urban form. However, recent high levels of apartment development, especially in the capital cities, arguably have failed to deliver the social and environmental advantages anticipated from providing higher density housing in established areas. Instead, rapid densification has occurred alongside, and is directly

¹ The content of this section was developed in a paper that the author presented to the World Sustainable Built Environment Conference, held in Gothenburg Sweden (and online) in November 2020.

related to, a substantial decline in the affordability of housing for rent and purchase, and spatial polarisation of housing markets.

Apartments represent a persistent problem for Australian planning and resolving this problem will be critical to managing Australia's transition to urban sustainability, while improving access to quality, affordable housing.

Apartments as a development type pose a unique set of challenges for planning and other regulatory systems. The recent proliferation of apartments has highlighted the contingent nature of existing development controls, which have evolved in conjunction with market processes and established structures of housing provision, principally suburban housing growth.

Apartment development presents a challenge to this established model, akin to the challenge that integrated sustainable development represents for planning systems as a whole.

5 Interstate and international examples

An analysis in 2014 of apartment design regulations that could be identified using a desktop review process, augmented by interviews with people from selected jurisdictions, led to the following conclusion. To be comprehensive and effective, the management of apartment development requires four main components:

- A clearly articulated policy position with legislative ‘teeth’
- Clearly defined minimum standards, applied jurisdiction wide
- Appropriate opportunity for local or contextual variation, as necessary, within clearly defined parameters
- A development assessment process that supports qualitative (case based) considerations, while being clear, consistent, and efficient

The jurisdiction in Australia with the most comprehensive and effective regulation of apartment design was NSW.

- *NSW State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development (SEPP 65)* was identified by the COAG Reform Council Review of Capital City Strategic Planning Systems as national ‘best practice’.
- SEPP 65 legislates: 9 Design Quality Principles, and the process for the establishment and operation of design review panels.
- The NSW Apartment Design Guide (ADG) provides guidance on the application and interpretation of the SEPP 65 Design Quality Principles in relation to specific development.
- Some components of the ADG are given statutory force through reference in SEPP 65 and where they are applied in local government Development Control Plans.
- In addition, NSW planning regulation requires all applications for apartment development to be accompanied by a statement of design verification from a ‘qualified designer’ (i.e., a registered architect), stating that they designed or oversaw the design of the development, as well as how the design quality principles of SEPP 65 and the design objectives of the ADG have been addressed.
- Importantly, this type of design verification by a registered architect is required at three additional points during the development process:
 - If a modification of the development consent is subsequently sought
 - Once the construction documentation is completed (to apply for a Construction Certificate)
 - When the built project is completed (to obtain a Certificate of Occupancy)
- This ensures that the level of design quality and amenity agreed and approved at the planning stage of the project is protected throughout subsequent phases, as the design is developed and refined, and as new personnel become involved with the assessment process.