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Environment and Planning Committee



Inquiry into apartment design standards

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Legislative Assembly Environment and Planning Committee

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About the Committee

Functions

The Environment and Planning Standing Committee is established under the Legislative Assembly Standing Orders Chapter 24—Committees.

The Committee's functions are to inquire into and report on any proposal, matter or thing connected with the Department of Environment, Land, Water and Planning and related agencies.

The Standing Committee must inquire into, consider and report to the House on any proposal, matter or thing that is relevant to its functions and has been referred to the Committee by resolution of the House.

The Standing Committee may inquire into, consider and report to the House on any annual report or other document relevant to the functions of the Committee that is tabled in the House.

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This report is available on the Committee's website.

Contents

Preliminaries

Committee membership	ii
About the Committee	iii
Terms of reference	ix
Chair's foreword	xi
Executive summary	xiii
Findings and recommendations	xix
Acronyms and terms	xxxi

PART I

1	Background	1
1.1	Conduct of the Inquiry	1
1.2	Inquiry process	1
1.3	Outline of the report	2
1.4	Context of the Inquiry	2
1.4.1	Growing population in apartments	4
1.4.2	Population and household composition	5
1.4.3	Build-to-Rent	9
1.4.4	Impact of COVID-19	9
1.5	Scope of the Inquiry	10
1.6	Key definitions	10
1.6.1	Apartment and apartment development	11
1.6.2	Liveability	11
1.6.3	Good design	12
2	Current regulation of apartment design standards	15
2.1	Governance arrangements and key stakeholders	15
2.1.1	Commonwealth	15
2.1.2	Victoria	15
2.1.3	Local government	17
2.1.4	Other stakeholders	17
2.2	The Better Apartments Design Standards	18
2.3	Prescriptive vs performance-based systems for apartment design	21

PART II

3	Australian jurisdictions	25
3.1	New South Wales	25
3.1.1	Governance and regulation of apartment design standards	25
3.1.2	Adaptability to Victorian context	30
3.2	Western Australia	35
3.2.1	Governance and regulation of apartment design standards	35
3.2.2	Adaptability to Victorian context	37
3.3	South Australia	39
3.3.1	Governance and regulation of apartment design standards	39
3.3.2	Adaptability to Victorian context	40
4	International jurisdictions	43
4.1	London	43
4.1.1	Governance and regulation of apartment design standards	44
4.1.2	Adaptability to Victorian context	46
4.2	Toronto	49
4.2.1	Governance and regulation of apartment design standards	50
4.2.2	Adaptability to Victorian context	52
4.3	Auckland	55
4.3.1	Governance and regulation of apartment design standards	55
4.3.2	Adaptability to Victorian context	58

PART III

5	Improvements to dwelling amenity	63
5.1	Accessibility and universal design	63
5.2	Apartment size	65
5.3	Daylight	69
5.4	Layout and room sizes	73
5.5	Private open space	75
5.6	Storage	77
5.7	Outlook	78
5.8	Windows	79
5.9	Aspect	81
5.10	Diversity of apartments	84

6	Improvements to building amenity and performance	85
6.1	Sustainability and environmentally sustainable design principles	85
6.1.1	State-wide approach	85
6.1.2	Net-zero emissions target	87
6.2	Building accessibility	89
6.3	Building setback and separation	91
6.4	Communal open space	92
6.4.1	Definition and guidance	93
6.5	Transport and vehicles	97
6.5.1	Car parking	97
6.5.2	Electric vehicles	98
6.6	Landscaping	100
6.7	Noise impacts and attenuation	102
6.8	Ventilation of common areas	103
6.9	Waste and recycling	104
6.10	Building safety	106
6.10.1	Fire alarms	106
6.10.2	Building defects	107
7	Improvements to external amenity and urban context	111
7.1	External building amenity	111
7.1.1	Building height and density	111
7.1.2	Wind impacts	114
7.1.3	Street integration	115
7.2	Master planning	116
7.2.1	Access to public open space and services	118
7.3	Community building	119
7.3.1	Placemaking	121
8	State-wide improvements	123
8.1	Compliance and enforcement	123
8.1.1	Design responsibility and verification	123
8.1.2	Design review panels	126
8.1.3	Procurement arrangements	130
8.2	Innovation	133
8.2.1	Design excellence programs	133
8.3	Longevity	135
8.3.1	Retrofitting	135

Contents

8.4 Education and training	137
8.4.1 Local planners	137
8.5 Affordability	139

Appendices

A About the Inquiry	143
B National Construction Code	149

Terms of reference

Inquiry into apartment design standards

On 4 August 2021 the Legislative Assembly agreed to the following motion:

That this House refers an inquiry into apartment design standards to the Environment and Planning Standing Committee for consideration and report no later than 30 March 2022* and the Committee should consider better apartment design standards, in a global context including, but not limited to, an examination of the:

- (a) current apartment living standards in Victoria;
- (b) improvements that can be made to the liveability in apartments and apartment building developments, including communal areas; and
- (c) initiatives undertaken by other states or nations that have improved apartment design standards.

*The reporting date was extended to 30 June 2022 by resolution of the Legislative Assembly on 7 September 2021.**

**The reporting date was further extended to 31 August 2022 by resolution of the Legislative Assembly on 8 March 2022.

Chair's foreword

Effective apartment design standards are fundamental in ensuring that apartments are liveable and meet the standards of all residents. With a growing proportion of Victorians choosing to live in apartments, it is critical that apartment design standards improve the liveability and amenity of apartments and apartment developments. Victoria is projected to reach a population of 11.2 million by 2056 with an average increase of 1.5% annually. Meanwhile, Greater Melbourne is projected to grow by approximately 4 million and Victoria's regions are expected to grow by just over 700,000 in the same period.

COVID-19 has had a fundamental impact on what factors are important to Victorians living in apartments and has brought about the need for quality housing for all Victorians into focus. Extended periods in lockdown have highlighted the importance of apartment design for health and wellbeing, and the provision of adequate space for relaxation, ventilation and everyday living.

With increasing concerns around affordability and location, more families are choosing to reside in apartments rather than detached dwellings. Families with children are forecast to represent the highest rate of growth in Victorian households from 2016 to 2056. Changes in the purchase profile of apartments, and the move away from an investor market towards an owner-occupier market, have also altered the demographics of apartment living. These trends in apartment living and apartment development throughout Victoria have raised issues around effective apartment design and planning.

While this report acknowledges that not enough time has passed to fully assess the impact of the *Better Apartments Design Standards*, an early insight shows they may have contributed to improved design across Victoria. Notwithstanding, given the current pipeline of residential development in Victoria, it is important that early assessments are made to improve outcomes in the future.

Throughout the Inquiry, the Committee aimed to address concerns that were highlighted through the submissions it received, those raised at public hearings and site visits, and in broader research and analysis. The Committee sought extensive community input in order to consider a wide range of matters related to amenity for apartment residents. It also examined evidence from state and local governments, industry and other organisations, to provide a balanced and factual overview of the issues. As part of the terms of reference to consider apartment design in a global context, the Committee also assessed various Australian and international jurisdictions' apartment design policies to highlight areas for improvement in Victoria.

As the evidence provided to this Inquiry has highlighted, there is much that the Victorian Government can do—in partnership with local government and industry—to increase the liveability of apartments in Victoria. The report makes a number of

recommendations around improvements to dwelling amenity, building amenity and performance, external amenity and urban context, and state-wide policy.

Some of the key recommendations made by the Committee include:

- the provision of a minimum size for new apartments in Victoria
- a clear and quantifiable definition of adequate daylight in apartments and guidance to maximise sunlight access
- increased guidance around improved communal spaces in apartment developments
- an investigation into ways to improve ventilation in apartments and apartment developments
- consideration of the development of a state-wide framework for design review panels
- incorporating sustainability into the development and design aspects of Victoria's apartment planning system
- establishment of a state-wide approach to environmentally sustainable design
- expanding design guidelines to include a broader definition of accessibility.

On behalf of the Committee, I would like to thank all stakeholders who made submissions and gave evidence at public hearings for the Inquiry. The Committee understands the time and effort required to produce detailed evidence and is grateful for the contributions it received. We thank the wide range of individuals, community and non-government organisations, industry groups, local government, and state government agencies who contributed to the Inquiry.

I would also like to thank my fellow Committee Members, particularly the Deputy Chair, Mr David Morris MP, for their contributions and commitment throughout the Inquiry. On behalf of the Committee, I also extend our thanks to the Secretariat for their support.



Ms Sarah Connolly MP
Chair

Executive summary

Chapter 1—Background

Chapter 1 outlines how the Inquiry analyses issues associated with apartment design and development in Victoria in the context of projected increases in population size, distribution and composition in the coming years.

Victoria is projected to reach a population of 11.2 million by 2056 with an increase of 1.5% per annum. Greater Melbourne is projected to grow by approximately 4 million people and Victoria's regions are expected to grow by just over 700,000 in the same period. While Greater Melbourne and Victoria experienced a fall in population from 2020–2021, largely due to the impacts of COVID-19, the medium and longer-term implications of COVID-19 on population distribution are difficult to predict. In addition, the composition of Greater Melbourne's population is changing, with more people choosing to live in apartments, including families and senior Victorians. The number of households in Victoria is projected to double from 2.4 million in 2016 to 4.6 million by 2056. With household sizes expected to decrease, Victoria is projected to require an additional 2.3 million dwellings between 2016 and 2056.

The *Better Apartments Design Standards* (BADS) were introduced into the Victoria Planning Provisions (VPPs) in 2017 in response to increasing numbers of Victorians choosing to live in apartments. In 2015, it was estimated that an additional 480,000 apartments would be required to accommodate a projected population of 7.7 million in Melbourne by 2051.

Families with children are forecast to represent the highest rate of growth in Victorian households from 2016 to 2056. The price of apartments compared with detached and semi-detached dwellings is generally more affordable. Historically, apartment development in Victoria has largely been an investor market, however, Victoria is also experiencing an increase in owner-occupier apartments. These factors mean there is likely to be continued demand for larger apartments to accommodate families.

The COVID-19 pandemic highlighted the need for quality housing for all Victorians. For example, extended periods in lockdown emphasised the importance of apartment design for health and wellbeing, and the provision of adequate space for relaxation, ventilation and everyday living. Evidence considered by the Committee highlighted some possible opportunities for improvement in the current BADS, particularly in relation to windows and ventilation, apartment size and general liveability. The pandemic also accelerated a population shift to rural and regional Victoria, resulting in increased demand for apartments in those areas.

Apartments are defined as attached dwellings that are self-contained residences, and apartment developments comprise several such dwellings. 'Liveability' of apartment developments is a key goal in BADS and other Victorian Government strategic planning

policy frameworks. It includes the goal to make Melbourne liveable through the principle of '20-minute neighbourhoods' where people are able to meet most of their daily needs within a 20-minute walk from their home. 'Good design' is also a key concept discussed in this Inquiry, which encompasses the design of an individual apartment and apartment building, as well as the planning and design of the surrounding neighbourhood. It acknowledges that a 'one size fits all' approach does not exist for apartment design.

Chapter 2—Current regulation of apartment design standards

Chapter 2 discusses the key regulatory oversight mechanisms for apartment design at all levels of government and introduces BADS as the design standard for Victorian apartment developments.

At the Commonwealth level, the National Construction Code (NCC) is Australia's primary instrument for the design and construction of buildings and structures. In Victoria, apartment design is overseen by the Department of Environment, Land, Water and Planning (DELWP) in conjunction with agencies such as the Office of the Victorian Government Architect (OVGA). Local councils perform a central role in planning and building functions, including to assess planning applications and issue planning permits. Other important stakeholders include the property development industry, professional associations and research institutes, and individuals. Collaboration between all stakeholders is a foundational aspect to the apartment planning approach of Victoria.

Research by the OVGA in 2013–14 identified a need to improve the quality of apartment design in Victoria. As a result, the initial BADS was adopted in 2017 and focused on improving the internal liveability of apartments for residents. The updated BADS issued in February 2021 focused on external controls to improve apartment design in relation to surrounding neighbourhoods.

The chapter explains that while empirical evidence on the impact of BADS is not yet available as an appropriate period of time has not yet passed to assess its impact, anecdotal evidence suggests it has contributed significantly to lifting the quality of apartment design across the industry. The Standards are a useful additional tool to the requirements set by the NCC.

The chapter also considers the benefit of prescriptive or performance-based systems for apartment design. BADS adopts a performance-based approach, which is also used in the Victorian VPPs for residential development more generally. Some stakeholders argued for more prescriptive standards to be adopted, while others preferred the flexibility of a performance-based system which can allow for innovation in development design. Ultimately, most discussions acknowledged that a balance should be struck between setting flexible standards and ensuring a baseline is met.

The chapter concludes that a largely performance-based approach is in line with other areas of residential development planning and should continue in the interests of ensuring consistency for the industry. However, there is evidence from the Inquiry

to suggest that some prescription, including minimum apartment size, can lead to improved outcomes in apartment design.

Chapter 3—Australian jurisdictions

Chapter 3 discusses the governance and regulation of apartment design standards in three Australian jurisdictions—New South Wales (NSW), Western Australia (WA) and South Australia (SA).

The NSW approach is broadly considered to provide an effective and consistent policy, and the chapter considers relevant lessons for Victoria, including its more prescriptive approach. At the dwelling level, a mandated minimum apartment size is adopted in NSW, which many stakeholders considered Victoria could implement. Further, minimum daylight requirements for apartments and higher ventilation requirements are adopted in NSW. At the building level, NSW contains higher standards for building separation and the provision of communal open space. The regular use of master plans in NSW is also highlighted in the chapter, as well as several state-wide policy initiatives, such as design review panels and design verification.

The chapter further considers dwelling and building policies in WA that Victoria could learn from, including the setting of minimum standards for daylight, and higher standards for natural ventilation and building separation.

The SA policy approach to accessibility provides specific guidance on apartment living for aging populations, including to articulate several overarching principles aimed to be embedded in any future planning around housing and precinct design for older residents. While Victoria addresses accessibility in BADS, the chapter discusses opportunities to expand the policy in reference to the SA model. At a state-wide level, SA employs design review panels and a strong design review framework.

Chapter 4—International jurisdictions

Chapter 4 examines the governance and regulation of apartment design standards in three international jurisdictions—London, Toronto and Auckland.

The chapter discusses London's standards for apartment design including its use of detailed planning policy frameworks; incorporation of master planning; mandatory requirements for accessibility; improved consideration of aspect, daylight and sunlight in its standards; and guidance around communal open spaces within the standards.

Toronto utilises family-friendly design in its guidance, particularly through the establishment of the *Growing Up: Planning for Children in New Vertical Communities Urban Design Guidelines*. The chapter discusses Toronto's approach to universal design and considers that it provides a framework for the implementation of family-friendly apartment standards. The chapter also discusses Toronto's approach to neighbourhood planning, which considers planning at the unit, building and neighbourhood level.

Overall, Toronto's policies around planning and local context offer an example which Victoria can draw lessons from.

In Auckland, the approach to apartment design encompasses issues such as site design, building placement, outdoor spaces, and the apartment buildings themselves, including design best practice. The chapter outlines Auckland's standards that Victoria could consider further including daylight, natural ventilation and building setback. It also summarises the planning environment for apartment design in Auckland, comprising a regulatory approach and long-term plan with measurable outcomes attached.

Chapter 5—Improvements to dwelling amenity

Chapter 5 focuses on specific improvements that could be made to BADS to improve the internal amenity and liveability of apartment dwellings in Victoria.

Accessibility and universal design are key aspects for promoting equal access to apartments for all Victorians. The chapter highlights opportunities for improvement in the current BADS as it focuses on accessibility for individuals with limited mobility and does not encompass a broader definition of accessibility, including senior Victorians and families with children.

Apartment size is also a key issue, with Chapter 5 exploring whether a total minimum apartment size should be stipulated within BADS, as found in other Australian and international jurisdictions. The Committee received evidence to suggest that a minimum size would support good design for new apartments throughout Victoria.

The chapter includes findings and recommendations on a number of other internal dwelling issues. For example, it includes discussions on daylight within dwellings; apartment layout and room sizes; guidance on private open space; minimum sizes for storage spaces; and aspect issues, including ways to maximise sunlight access, liveability, and resident comfort. The chapter also discusses relative improvements generated by BADS, including requirements for bedrooms with windows. It further addresses the need for diversity in apartment developments across Victoria, particularly larger apartments to accommodate families.

Chapter 6—Improvements to building amenity and performance

This chapter outlines opportunities for improvements to apartment buildings to enhance their performance, liveability and amenity.

It particularly considers the incorporation of sustainability into development and design aspects of Victoria's apartment planning system. The chapter outlines the need for a state-wide approach to environmentally sustainable design, and the Victorian Government goal for net-zero emissions.

Along with new Australian standards to improve building accessibility, the chapter discusses the need for guidance in relation to building separation, particularly to set metric distances within BADS. It outlines other potential changes to standards in areas such as communal open space to improve social interaction, recreation and amenity needs of residents; transport and vehicle considerations including car parking; ongoing maintenance of landscaping; internal and external noise impacts within apartment buildings; improved ventilation for common areas; and Victoria's new four-stream system for waste collection.

The chapter also discusses issues relating to building safety. In particular, enforcement and compliance of fire safety systems was raised by stakeholders. The chapter acknowledges that work is in progress through the Building Reform Expert Panel to address a number of issues.

Chapter 7—Improvements to external amenity and urban context

Chapter 7 discusses improvements to enhance the external amenity of apartment buildings and ensure greater connection with the local urban context.

A key issue explored is acceptable building height and density controls to enable greater liveability in high-density areas and improve both internal and external amenity. Regarding a new standard in BADS which aims to prevent the generation of excess wind, the chapter outlines differing views received on this policy and potential issues that need to be closely considered in future. It further examines the BADS goal for street integration to ensure apartment buildings contribute to the life of the neighbourhood.

At a broader level, master planning that involves apartment developments presents a solution to improve interaction between apartment buildings and local neighbourhoods. The chapter reiterates examples of master plans used locally and internationally and considers the incorporation of master plans in Victorian frameworks.

Community building and placemaking are also key concepts to improve connection with surrounding neighbourhoods and the liveability of apartments. The chapter outlines ways in which a sense of community and place can bring about social inclusion and improve connectivity. Victorian design standards could be enhanced to situate apartments within their neighbourhoods and precincts and enhance the liveability of apartments.

Chapter 8—State-wide improvements

Chapter 8 examines the broader regulatory framework which supports apartment design in Victoria.

The chapter considers options for a stronger compliance framework. Design responsibility and verification is a key step that could be considered further to assess benefits of verification by registered architects in BADS. It further recommends that DELWP investigate the development of a state-wide framework for design review panels, to assess development applications on behalf of local council planning authorities. The use of Design, Novate and Construct contracts and general procurement arrangements are also explored to ensure the provision of higher quality outcomes of apartments in future.

The chapter explores actions that can be undertaken to encourage innovation in apartment design, particularly through design excellence programs and embedding design excellence policy.

As apartment living is likely to be a long-term form of housing for Victoria's growing and densifying population, retrofitting older apartment buildings to ensure longevity requires a state-wide approach. Understanding and responding to the full life cycle of apartments is essential and could include the implementation of post-occupancy surveys for apartment residents.

The chapter also outlines the need for sufficient education and training on BADS. This is particularly important for local council planners so that they can appropriately fulfill their assessment, monitoring and enforcement functions. Finally, the chapter outlines the issue of housing affordability, which is a key state-wide concern that could in part be addressed at the planning system level to support the increased supply of affordable housing.

Findings and recommendations

1 Background

FINDING 1: The Committee considers there are a number of factors that contribute to good design of both individual apartments and apartment developments, including: sun and light, thermal comfort, performance and sustainability, connections to nature and outlook, privacy and noise, flexibility and adaptability, safety, amenity and comfort, neighbourhood amenity and communal spaces.

13

2 Current regulation of apartment design standards

FINDING 2: While the Department of Environment, Land, Water and Planning has primary oversight responsibilities for apartment design standards, a number of State Government agencies, including the Victoria Planning Authority and the Office of the Victorian Government Architect, are also involved in the process.

17

FINDING 3: Collaboration between local councils and State Government, and the community, is a foundational aspect to the apartment design planning approach of Victoria.

18

FINDING 4: While an appropriate period of time has not yet passed to assess the impact of the *Better Apartment Design Standards* (BADS), early evidence suggests it may have contributed to lifting the quality of apartment design across the industry. BADS is a useful additional tool to the requirements of the National Construction Code.

21

FINDING 5: The Committee agrees a largely performance-based approach is in line with other areas of residential development planning and should continue in the interests of ensuring consistency for the industry.

23

FINDING 6: Notwithstanding Finding 4, there is evidence from the Inquiry to suggest that some prescription, including minimum apartment size, can lead to improved outcomes in apartment design.

23

3 Australian jurisdictions

FINDING 7: New South Wales's (NSW) *State Environmental Planning Policy No 65*, which sets out the NSW Government's policy direction for residential apartment development, is broadly considered to be an effective and consistent policy around apartment design standards. 27

FINDING 8: Provisions around minimum apartment size, daylight, and ventilation have led to improved apartment design outcomes in New South Wales. 32

FINDING 9: A clear definition of communal space and standards around building separation would improve the amenity and liveability of new apartment developments. 33

FINDING 10: The use of master plans in New South Wales has been beneficial in the planning context. 33

FINDING 11: Unlike Victoria, New South Wales requires a registered architect to be engaged for complex projects and large developments, a provision supported by some stakeholders involved in the Inquiry. 35

FINDING 12: Western Australia uses a number of complementing policies to regulate apartment design standards. 37

FINDING 13: Both New South Wales and Western Australia mandate minimum daylight access in residential apartments. 38

FINDING 14: Natural ventilation requirements in Western Australia provide for higher ventilation standards than those in Victoria. 38

FINDING 15: Unlike in Victoria, minimum standards for building separation in Western Australia are regulated. 39

FINDING 16: South Australia's *Housing for Life: Designed for Living* policy effectively highlights several principles to be embedded in any future planning around housing precinct design for older residents. 40

FINDING 17: South Australia employs a unique approach in guidance around daylight access, with guidance for the minimum and maximum dimensions of lightwells included in the standards. 41

FINDING 18: South Australia has a design review framework with a separate Local Design Review Scheme which provides local councils a consistent state-wide approach to design review. 41

4 International jurisdictions

FINDING 19: London has implemented a planning framework for the consideration of dwellings situated in their neighbourhoods and local areas. 46

FINDING 20: London effectively utilises mandatory requirements for the adoption of accessible standards for new dwellings to accommodate the needs of its diverse population including people with disabilities, older people and families with young children. 47

FINDING 21: London's approach provides detail on issues relating to aspect, daylight and sunlight in its standards, which can be of benefit in the design of developments and dwellings. 48

FINDING 22: London encourages good design to enable community enjoyment and increased amenity of communal open spaces, including considering play provisions for children and accessibility of spaces for all residents. 49

FINDING 23: The Toronto *Growing Up: Planning for Children in New Vertical Communities Urban Design Guidelines* provide a framework for the implementation of family-friendly apartment design standards. 54

FINDING 24: Toronto has provisions in place around planning and local context considerations, particularly through the *Growing Up: Planning for Children in New Vertical Communities Urban Design Guidelines*. 55

FINDING 25: Provisions in the *New Zealand Building Code* and the *Auckland Unitary Plan* and additional guidance in the *Auckland Apartment Design Guide* highlight that regulation and guidance on measurable access to daylight in apartments is more prescriptive in Auckland than Victoria. 59

FINDING 26: Natural ventilation in apartments and apartment buildings is prescribed in the *New Zealand Building Code*, supported by the Auckland Council’s *Unitary Plan* through mandating of direct access to private outdoor space. This is strengthened by the detailed *Apartment Design Guide* which outlines design solutions to promote natural ventilation.

60

FINDING 27: Auckland has provisions in place around planning and local context considerations, particularly through the *Auckland Plan 2050*, to support the growing population and trends towards apartment living.

62

5 Improvements to dwelling amenity

FINDING 28: The objective of the Better Apartments Design Standard D17 and associated guidelines on accessibility are focussed on limited mobility and do not encompass individuals or groups considered in a broader definition of accessibility.

65

RECOMMENDATION 1: Following the implementation of the update to the National Construction Code, the Department of Environment, Land, Water and Planning expand Better Apartments Design Standard D17 and associated guidelines to include a broader definition of accessibility beyond mobility.

65

FINDING 29: While there are contrasting opinions on whether minimum apartment size should be stipulated within the Victoria Planning Provisions (VPPs), there is evidence to suggest that outlining a minimum size in the VPPs would support good design for new apartments throughout Victoria. New South Wales, Western Australia, Auckland, Dublin, Edinburgh, and many cities across the United States of America specify minimum apartment sizes.

68

RECOMMENDATION 2: The Department of Environment, Land, Water and Planning provide a minimum size for new apartments in its next review of the *Better Apartments Design Standards*.

68

FINDING 30: The use of lightwells as a primary source of daylight is discouraged through the *Better Apartments Design Standards* (BADs). While there is no evidence to suggest if BADs had discouraged the use of lightwells in new apartments, some stakeholders believed lightwells should be prohibited in line with other jurisdictions such as Western Australia.

72

RECOMMENDATION 3: The Department of Environment, Land, Water and Planning review the position on lightwells in the next update of the *Better Apartments Design Standards*. 72

FINDING 31: The *Better Apartments Design Standards* (BADS) and *Apartment Design Guidelines for Victoria* acknowledge the widely understood link between adequate daylight and resident health. While there is not a specific standard dedicated to daylight within BADS, as there are in other jurisdictions such as New South Wales, Western Australia and South Australia, there are several relevant standards that are observed to be directly connected, including layout and room size, windows, aspect and building setback. 73

RECOMMENDATION 4: The Department of Environment, Land, Water and Planning define and quantify ‘adequate daylight’ in the *Better Apartment Design Standards*. 73

FINDING 32: There is widespread evidence to suggest that specifying a minimum amount of sunlight in habitable rooms is beneficial to resident health. 73

RECOMMENDATION 5: In quantifying ‘adequate daylight’, the Department of Environment, Land, Water and Planning incorporate considerations around sunlight. 73

FINDING 33: Better Apartment Design Standard D24 and associated guidelines are restricted to defining minimum bedroom and living spaces and may be influencing poor outcomes in other spaces such as kitchens and dining areas. 75

RECOMMENDATION 6: The Department of Environment, Land, Water and Planning include guidance around kitchen and dining minimum room size and layout within Better Apartment Design Standard D24. 75

FINDING 34: Some local government stakeholders involved in the Inquiry argued that the minimum standard for private open space in the *Better Apartments Design Standards* is insufficient. 77

RECOMMENDATION 7: The Department of Environment, Land, Water and Planning review minimum standards for private open spaces in the *Better Apartments Design Standards*. 77

FINDING 35: The minimum requirements for storage space outlined in Better Apartments Design Standard D20 and B44 are not necessarily sufficient for the needs of occupants in apartments of different sizes and do not include specific provisions for bicycle storage. 78

RECOMMENDATION 8: The Department of Environment, Land, Water and Planning review the concerns raised around minimum size for storage in new apartments, including to incorporate bicycle storage, in its next review of the *Better Apartments Design Standards*. 78

FINDING 36: The introduction of the Better Apartments Design Standards D26 and B48 has significantly improved the design of new apartments across Victoria by requiring bedrooms with windows. 81

FINDING 37: There was broad consensus amongst stakeholders that apartments should be designed with more than one aspect to optimise sunlight access, liveability, and resident comfort and to reduce energy consumption. Aspect is not currently considered as a specific standard in *Better Apartments Design Standards*, however, it is covered somewhat through related standards. 83

RECOMMENDATION 9: The Department of Environment, Land, Water and Planning include guidance around aspect, including in relation to maximising sunlight access, liveability, and resident comfort, within the *Better Apartments Design Standards*. 83

FINDING 38: There was broad consensus amongst stakeholders to suggest the need for diversity in apartment developments across Victoria, particularly larger apartments to accommodate families. 84

RECOMMENDATION 10: The Department of Environment, Land, Water and Planning develop guidelines around accommodating families in apartments with consideration to the Toronto *Growing Up: Planning for Children in New Vertical Communities Urban Design Guidelines*. 84

6 Improvements to building amenity and performance

FINDING 39: There is scope to incorporate the Environmentally Sustainable Development targets in the *Better Apartments Design Standards* to strengthen sustainability provisions. 87

RECOMMENDATION 11: The Department of Environment, Land, Water and Planning update the *Better Apartments Design Standards* and *Victoria Planning Provisions* to implement a state-wide requirement for environmentally sustainable design, as outlined in the *Environmentally sustainable development of buildings and subdivisions: A roadmap for Victoria's planning system*. 87

FINDING 40: The *Better Apartments Design Standards* could be strengthened through the addition of lower emissions targets. 89

RECOMMENDATION 12: The Department of Environment, Land, Water and Planning strengthen the *Better Apartments Design Standards* to reflect Victorian Government targets for net-zero emissions. 89

FINDING 41: Expected changes to the National Construction Code in 2022 will improve accessibility of new apartment buildings for people with a disability. 91

FINDING 42: Building setback is an important consideration in apartment design standards and could be further specified within the *Better Apartments Design Standards*. 92

RECOMMENDATION 13: The Department of Environment, Land, Water and Planning update the *Better Apartments Design Standards* to include specific metric guidance for building setbacks. 92

FINDING 43: Well-designed open communal space is a key feature of community life within apartment buildings and can positively impact residents' health and wellbeing. 95

RECOMMENDATION 14: The Department of Environment, Land, Water and Planning update the *Better Apartments Design Standards* to include enhanced guidance on communal open spaces, including reviewing examples such as London and Toronto. 95

FINDING 44: Further consideration of corridor requirements would likely enhance building amenity and increase building accessibility for many residents, including people with a disability and parents with young children. 96

RECOMMENDATION 15: The Department of Environment, Land, Water and Planning update the *Better Apartments Design Standards* to provide improved guidance on corridors as communal spaces within apartment buildings. 96

FINDING 45: Rooftop gardens and similar types of communal spaces are important to improve liveability of apartment buildings and strengthening guidance in this area would be beneficial. 96

RECOMMENDATION 16: The Department of Environment, Land, Water and Planning update the *Better Apartments Design Standards* to provide improved guidance on rooftop gardens as communal spaces. 97

FINDING 46: Current regulatory arrangements around parking for apartments are sufficient. Apartments located in or near the Melbourne Central Business District, or within close proximity to employment or public transport infrastructure, may require little or no parking compared to sites not close to similar amenities. 98

FINDING 47: The *Better Apartments Design Standards* do not currently provide for future transport needs, such as electric vehicle charging infrastructure. 99

RECOMMENDATION 17: The Department of Environment, Land, Water and Planning update the *Better Apartment Design Standards* to require the provision of electric vehicle charging infrastructure. 100

FINDING 48: While landscaping is an important part of apartment developments and can improve external amenity, there are opportunities for improvement around neighbourhood character, a green outlook, and ongoing maintenance arrangements. 102

RECOMMENDATION 18: The Department of Environment, Land, Water and Planning amend the *Better Apartments Design Standards* to clarify roles and responsibilities around ongoing maintenance of landscaping. 102

FINDING 49: Noise reduction standards in the *Better Apartments Design Standards* require an update to better address internal and external noise impacts. 103

RECOMMENDATION 19: The Department of Environment, Land, Water and Planning update the *Better Apartments Design Standards* to include standards to address noise impacts found internally within apartment buildings, and also to strengthen current requirements that apply to external noise issues. 103

FINDING 50: Ensuring natural ventilation is an important consideration to improve the amenity and performance of shared spaces in apartment buildings. 104

RECOMMENDATION 20: The Department of Environment, Land, Water and Planning incorporate provisions into the *Better Apartments Design Standards* around improved ventilation in common areas in new buildings. 104

FINDING 51: The new four-stream system for waste collection will require some policy consideration within the *Better Apartments Design Standards*. 105

RECOMMENDATION 21: The Department of Environment, Land, Water and Planning update the *Better Apartments Design Standards* to incorporate the introduction of the four-stream waste and recycling system, as well as other updates to strengthen waste collection practices. 105

FINDING 52: The recommendations in the national *Building Confidence – Improving the effectiveness of compliance and enforcement systems for the building and construction industry across Australia* and the *Framework for Reform: Modernising Victoria’s Building System* reports have not yet been implemented in Victoria. However, Victoria has taken proactive steps towards building reform through the work of the Victorian Cladding Taskforce and the Building Reform Expert Panel. 110

7 Improvements to external amenity and urban context

FINDING 53: Building height and density are important planning design considerations that impact both the internal and external amenity of apartment buildings, including the local urban context. 114

RECOMMENDATION 22: The Department of Environment, Land, Water and Planning develop guidance on acceptable building height and density with respect to the local context to enable greater liveability in high-density areas. 114

FINDING 54: It is likely too early to consider the impact of the new *Better Apartments Design Standards* relating to wind and the prevention of excessive winds by tall apartment buildings. The issue should be considered to determine the best ways to handle wind concerns on a precinct or individual building level, or as a combination of both. 115

RECOMMENDATION 23: The Department of Environment, Land, Water and Planning provide assistance to local governments at a precinct level to consider wind impacts in high density and major activity centres. 115

FINDING 55: Master plans can be used to ensure that apartment buildings and complexes are responsive to local urban context. 118

RECOMMENDATION 24: The Department of Environment, Land, Water and Planning work collaboratively with local government to develop guidance on effective master planning to ensure apartment complexes are responsive to local urban context. 118

FINDING 56: The Committee acknowledges the need for open spaces to support urban developments across Victoria is important and reiterates the series of findings and recommendations it made in its report on the *Inquiry into environmental infrastructure for growing populations*. 119

FINDING 57: Building a sense of community through connection with surrounding neighbourhoods plays a role in improving the liveability of apartments in Victoria. Fostering connections with not only the local physical urban context, but also with the broader community surrounding a development can improve the lives of residents. 121

FINDING 58: Incorporating concepts of community building and placemaking into the design of apartment developments can improve the liveability of apartments and enrich the social and community aspects of the surrounding neighbourhoods and precincts. 122

RECOMMENDATION 25: The Department of Environment, Land, Water and Planning work with all relevant stakeholders to incorporate community building and placemaking into Victorian apartment design policies to improve liveability of apartment buildings. 122

8 State-wide improvements

FINDING 59: Evidence from local government and industry highlights that further consideration should be given to design verification in Victoria, taking into account the views of local councils to determine what practice and regulatory impact this will have. 125

RECOMMENDATION 26: The Department of Environment, Land, Water and Planning work with local councils to consider the benefits of design verification by registered architects in the *Better Apartments Design Standards*. 126

FINDING 60: Design review panels are effective tools to improve compliance with performance-based apartment design standards, whilst also supporting design innovation. 129

FINDING 61: Some local councils are struggling to effectively administer design review panels to assess projects within their municipalities. 129

RECOMMENDATION 27: The Department of Environment, Land, Water and Planning investigate the development of a state-wide framework for local councils to administer design review panels, including guidance on what triggers a design review to take place, the composition of panels, and panel operation, conduct and costs. 129

RECOMMENDATION 28: The Victorian Government implement legislative approaches to mandate the referral of apartment designs to design review panels to ensure that advice given by panels holds legal weight for enforcement. 130

FINDING 62: Design, Novate and Construct contracts may have negative impacts on the quality of apartments and warrant further investigation 133

RECOMMENDATION 29: The Department of Environment, Land, Water and Planning investigate options for improving guidance around procurement models for apartment developments. 133

FINDING 63: Design excellence programs can be effective tools to encourage the innovative design of apartments. 134

RECOMMENDATION 30: The Department of Environment, Land, Water and Planning monitor the success of the *Future Homes Program* industry and student competitions in promoting design innovation with a view to developing future state-wide apartment design innovation programs. 135

RECOMMENDATION 31: The Victorian Government explore options to encourage design excellence through formal arrangements. 135

FINDING 64: Understanding the full life cycle of apartments and the experiences of older apartments which do not meet the current design standards is key to developing a stronger framework over the long-term life course of apartment buildings. 136

RECOMMENDATION 32: The Department of Environment, Land, Water and Planning develop a system for post-occupancy surveys of apartment residents to enrich understanding of the whole life cycle of apartment buildings and develop a stronger framework and scheme of regulation over the long-term life course of apartment buildings. 137

FINDING 65: Some local councils are not confident in fulfilling their assessment, monitoring and enforcement functions due to a lack of well trained and resourced planners. 138

RECOMMENDATION 33: The Department of Environment, Land, Water and Planning consider strategies to facilitate knowledge-sharing between local councils to ensure that planners across Victoria have sufficient expertise. 138

RECOMMENDATION 34: The Department of Environment, Land, Water and Planning develop an improved framework around monitoring and enforcement to ensure compliance with the *Better Apartments Design Standards*. 138

FINDING 66: Housing affordability, alongside cost pressures, is an issue affecting the liveability of apartments in Victoria. 141

RECOMMENDATION 35: The Victorian Government consider how planning system reform could support the supply of more affordable apartments in Victoria. 141

Acronyms and terms

20-minute neighbourhoods	Liveable places where people can access most of their daily needs locally without a car
ABS	Australian Bureau of Statistics
AHURI	Australian Housing and Urban Research Institute
AIA	Australian Institute of Architects
apartment	A dwelling located above the ceiling level or below the floor level of another dwelling and is part of a building containing two or more dwellings
Apartment Design Guidelines for Victoria	The guidelines published by the Department of Environment, Land, Water and Planning which set out the apartment design standards for Victoria
Apartment Design Policy	Western Australia's Residential Design Codes Volume 2 – Apartments
aspect	The aspect of an apartment refers to the directions and number of directions (such as single or dual) of openings such as windows, balconies and doors
BADS	Better Apartment Design Standards
BESS	Built Environment and Sustainability Scorecard
BTR	Build-to-Rent
building facades	The outside face of a building
building performance	Includes noise impacts, energy efficiency and waste and recycling
building separation	The distance between neighbouring buildings
building setback	How far a building is from the street or its boundary with another property
canopy tree	A tree which provides summer shade
CASBE	Council Alliance for a Sustainable Built Environment
CBD	Central Business District
circulation core	A lift or stairwell leading to apartments
communal open space	A space that can be accessed by all residents, such as a garden or rooftop garden. It does not include common areas such as bike storage or car parking.
cross ventilation	Where there are ventilation sources (for example windows or doors) on opposite sides of a dwelling so that air can flow through the building
DADA	The Darebin Appropriate Development Association
DELWP	The Victorian Department of Environment, Land, Water and Planning
Design Guidelines	The Design Guidelines for Sustainable Housing and Liveable Neighbourhoods South Australia
design review panels	Usually a group of industry experts with a range of backgrounds and knowledge, who are tasked with assessing development applications on behalf of local council planning authorities
design verification	A process through which a registered architect is required to verify that the design objectives outlined in the relevant apartment design standards have been met prior to planning approval being granted
DNC	Design, Novate and Construct
double-loaded corridor	A corridor with apartments on both sides of the corridor

Acronyms and terms

DP SEPP	New South Wales State Environmental Planning Policy (Design and Place) 2021
DPLH	The Western Australian Department of Planning, Lands and Heritage
dwelling amenity	Includes functional layout, room depth, windows, light, natural ventilation and accessibility
ESD	Environmentally sustainable design
ESM	Essential safety measures, such as fire alarms or sprinklers
EV	Electric vehicles
Future Homes project	The third phase in the Victorian Government's Better Apartment Design Standards, which uses the first two phases to demonstrate the future of apartment design through design plan packages and other tools.
GIA	Gross internal area
GLA	Greater London Authority
Greater Melbourne	Greater Melbourne Capital City Statistical Area, which is designed to represent the functional extent of Melbourne, including the population within the urban area of the city, as well as people who regularly socialise, shop or work within the city, and live in small towns and rural areas surrounding the city
habitable room	A room used for normal domestic activities, including a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room, home theatre and sunroom; but excluding a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes-drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods.
HIA	Housing Industry Association
high-rise apartment building	Apartment buildings over four storeys are considered as mid or high-rise
inclusionary zoning	Where developers are required or incentivised to incorporate affordable or social housing in their developments
IV	Infrastructure Victoria
landscape	The treatment of land for the purpose of enhancing or protecting the amenities of a site, the area in which it is situated and the natural environment. It includes landform and drainage, boundary treatments, street furniture and play equipment, hard landscape such as surfacing, and soft landscape such as trees, shrubs and other planting.
LHSPG	London Housing Supplementary Planning Guidance
lift core	See circulation core
light well	An unroofed space provided within a large building to allow light in
London Plan	Local Area Plan for London
low-rise apartment building	An apartment building up to four storeys tall
master plan	Master plans refer to often dynamic and long-term plans that provide a clear vision and framework of how an area can grow and develop.
MAV	Municipal Association of Victoria
natural ventilation	Ventilation from a source such as a window or door
NCC	National Construction Code
outlook	A place from which a view is possible; a vantage point
OVGA	Office of the Victorian Government Architect
PAC	Public Accountability Committee of the NSW Legislative Council

PCA	Property Council of Australia
performance based control systems	Indicative, rather than mandatory, policy standards that rely on discretion by decision-makers in judging applications for apartment developments
placemaking	Going beyond the urban design of spaces to encourage the creation of 'physical, cultural, and social identities that define a place and support its ongoing evolution' through community-based participation.
Plan Melbourne 2017-2050	The Victorian Government's long-term plan to ensure Melbourne remains liveable, sustainable and accessible to people of all ages and abilities
prescriptive regulatory system	Applies measurable criteria to assess a development and does not involve discretion applied by decision-makers
SDAPP	The Sustainable Design Assessment in the Planning Process
SEPP 65	New South Wales State Environment Planning Policy No 65
single-aspect apartments	Single-aspect apartments have only one face of the dwelling on the external face of the building with access to outside
single-loaded corridor	A corridor with apartments only on one side of the corridor
SPP 7.0	Western Australia's State Planning Policy 7.0 Design of the Built Environment
UDIA Victoria	Urban Development Institute of Australia, Victorian Division
VBA	Victorian Building Authority
VDRP	Victorian Design Review Panel
VIF2019	Victoria in Future 2019
VPA	Victorian Planning Authority
VPP	Victoria Planning Provisions

1 Background

1.1 Conduct of the Inquiry

On 4 August 2021, the Parliament of Victoria's Legislative Assembly agreed to refer an Inquiry into apartment design standards to the Environment and Planning Standing Committee (the Committee). The terms of reference required the Committee to consider better apartment design standards, including current apartment living standards in Victoria, improvements that can be made to the liveability in apartments and apartment building developments, including communal areas, and initiatives undertaken by other jurisdictions that have improved apartment design standards.

1.2 Inquiry process

The Committee advertised the Inquiry and called for submissions through its News Alert Service, the Parliament of Victoria website, and social media. The Committee sent over 300 letters to a wide variety of local and national stakeholders to inform them of the Inquiry and invite them to prepare a submission and/or participate in public hearings.

The Committee held three public hearings throughout 2021 and 2022, with a total of 52 witnesses from 22 organisations across Australia. The evidence the Committee received and considered included:

- formal submissions from the Department of Environment of Land, Water and Planning (DELWP), the Office of the Victorian Government Architect (OVGA), the Victorian Building Authority (VBA), Infrastructure Victoria (IV) and the Victorian Planning Authority (VPA) outlining the actions the Government has taken to implement, progress and improve apartment design standards throughout Victoria
- a total of 58 public submissions from government, academics and research institutes, advocacy groups and non-government organisations accepted by the Committee
- transcripts of public hearing proceedings attended by State and Local Government departments and agencies, and a range of peak bodies and expert witnesses
- site visits to multiple apartment complexes in Elwood, West Melbourne, Fairfield and Burwood East on Friday 1 April 2022.

Details of the submissions received, public hearings held, and site visits are set out in Appendix A.

1.3 Outline of the report

The report is divided into three parts, each with a thematic focus aligning with the terms of reference.

Part I (Chapters 1–2) outlines current apartment living standards in Victoria. Part I consists of this introductory chapter and Chapter 2, which examines the current regulation of apartment design standards in Victoria, including governance arrangements, and identifies key stakeholders.

Part II (Chapters 3–4) examines initiatives undertaken by other jurisdictions that have improved apartment design standards. Jurisdictional comparisons are made in Chapter 3—Australian jurisdictions and Chapter 4—International jurisdictions.

Part III (Chapters 5–8) highlights and examines the improvements that can be made to the liveability of apartments and apartment building developments through the following:

- Chapter 5—Improvements to dwelling amenity
- Chapter 6—Improvements to building amenity and performance
- Chapter 7—Improvements to external amenity and urban context
- Chapter 8—State-wide improvements.

1.4 Context of the Inquiry

In mid-2019, DELWP published *Victoria in Future 2019* (VIF2019), outlining Victoria's population projections over 40 years from 2016 to 2056.¹ As the official State Government projection of population and households, the Committee considered the data and projections provided in VIF2019 to inform its understanding of the growing and changing population throughout Victoria.

Population projections are estimates of the future size, distribution and composition of the population. Victoria is projected to add 4.7 million people to its population from 2018 to 2056, reaching a population of 11.2 million by 2056.² This represents annual average growth of 125,000 people, at a rate of 1.5% per annum, noting that population growth is not evenly distributed across Victoria.³

Patterns of urban and regional population change reflect the likelihood of individual places in attracting population growth and accommodating extra population. In 2019,

1 Department of Environment, Land, Water and Planning, *Victoria in future 2019: Population projections 2016 to 2056*, Melbourne, 2019.

2 Ibid., p. 7.

3 Ibid., pp. 7,9.

the Greater Melbourne Capital City Statistical Area (Greater Melbourne)⁴ accounted for approximately 77% of Victoria's population and over 85% of recent growth, which was projected to continue.⁵ As illustrated in Figure 1.1, Greater Melbourne was projected to grow by approximately 4 million people, increasing from 5 million in 2018 to 9 million by 2056. Over the same period, Victoria's regions were expected to grow by just over 700,000 from 1.5 million to 2.2 million.⁶ An interruption occurred to Victoria's growth in 2020 and 2021, and Greater Melbourne and Victoria experienced a fall in population, largely due to the impacts of COVID-19, including international border closures.⁷ Estimates suggest that Victoria's population is below growth projections produced by the Australian Bureau of Statistics (ABS) in 2018 and reflected in VIF2019.⁸ While the medium and longer-term implications of COVID-19 are difficult to predict, it is noted that Melbourne experienced a loss of 60,505 residents, or a 1.2% decline in population, for the 2020–21 financial year.⁹

In its submission, the Municipal Association of Victoria (MAV) suggested that demand for apartment living continues to increase for several reasons:

Apartments are more affordable compared to other types of residential development, are easier to maintain and are often found in amenity-rich locations close to jobs, open spaces and public transport. As housing affordability worsens, it is expected that apartment living will increase in popularity. As the popularity of apartment living increases, councils and the State must continually work to improve apartment living standards. Councils have undertaken significant research into housing demand, supply and affordability.¹⁰

Increased interest in apartment living and apartment development across Victoria has raised issues about apartment design and planning from individuals, peak bodies, and various organisations.¹¹ In making its findings and recommendations, this Inquiry aims to understand and analyse the issues and opportunities associated with apartment design and development in Victoria, taking into consideration the projected changes to population and demographics. Figure 1.1 illustrates the past and projected population in Greater Melbourne, regional Victoria, and the state as a whole.

⁴ ABS - Greater Capital City Statistical Areas (GCCSA) are geographical areas built from Statistical Areas Level 4 (SA4) and are designed to represent the functional extent of each of the eight State and Territory capital cities. They were designed to reflect labour markets using the 2011 Census travel to work data. This definition is designed to include the population within the urban area of the city, as well as people who regularly socialise, shop or work within the city, and live in small towns and rural areas surrounding the city: Australian Bureau of Statistics, *Greater Capital City Statistical Area (GCCSA)*, 2016, <[https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1270.0.55.001-July%202016-Main%20Features-Greater%20Capital%20City%20Statistical%20Areas%20\(GCCSA\)-10003](https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1270.0.55.001-July%202016-Main%20Features-Greater%20Capital%20City%20Statistical%20Areas%20(GCCSA)-10003)> accessed 27 May 2022.

⁵ Department of Environment, Land, Water and Planning, *Victoria in future 2019*, p. 9. At the time of writing this report the Australian Bureau of Statistics 2021 census data has not yet been released.

⁶ Ibid.

⁷ Ben Reid, *Visualising the population impacts of COVID-19 in Victoria*, Parliamentary Library and Information Service, Parliament of Victoria, Melbourne, 2022, pp. 1,7.

⁸ Ibid., p. 1.

⁹ Ibid., p. 9.

¹⁰ Municipal Association of Victoria, *Submission 27*, received 29 October 2021, p. 5.

¹¹ Department of Environment, Land, Water and Planning, *Better apartments: A discussion paper*, Melbourne, 2015, p. 13.

Figure 1.1 Past and projected population by major regions in Victoria 1976 to 2056

Source: Department of Environment, Land, Water and Planning, *Victoria in future 2019: Population projections 2016 to 2056*, 2019, p. 4.

1.4.1 Growing population in apartments

The *Better Apartments Design Standards* (BADs) were introduced into the Victoria Planning Provisions (VPPs) in 2017 in response to increasing numbers of Victorians choosing to live in apartments.¹² In 2015, it was estimated that an additional 480,000 apartments will be required to accommodate a projected population of 7.7 million in Melbourne by 2051.¹³

The growing population and demand for apartments in Melbourne is demonstrated by several periods of historic growth, resulting in large numbers of apartments being constructed:

- Between 1962 and 1974, the Housing Commission of Victoria built 45 high-rise blocks in the inner suburbs of Melbourne, adding to the diversity of Melbourne's housing, however, the construction of detached housing still dominated housing development.
- Between 2001 and 2007, average annual apartment approvals were approximately 4,000 in Melbourne. From 2007 to 2008, further significant expansion in apartment development and change in apartment construction occurred.
- By 2010, apartment approvals had grown to more than 10,000 and by 2014 approvals were over 14,000, making up nearly one third of all housing approvals in Melbourne.¹⁴

¹² Department of Environment, Land, Water and Planning, *Submission 20*, received 28 October 2021, p. 1.

¹³ Department of Environment, Land, Water and Planning, *Better apartments: A discussion paper*, p. 3.

¹⁴ *Ibid.*, p. 10.

- In 2016, there were approximately 1.2 million occupied apartments in Australia, 23% of those in Victoria, making up 12% of total dwellings in Victoria.¹⁵
- Approval of apartments fell from 13,000 in 2019–2020 to only 9,500 approvals from 2020–2021.¹⁶

It is yet to be determined if the changes in the patterns of apartment building approvals are temporary following the decrease in population since the COVID-19 pandemic, or if there will be a longer-term change in housing demand.¹⁷

The evidence assessed by the Committee supports that apartment growth is not limited to Melbourne's Central Business District (CBD). Significant numbers of apartments are being built in areas outside of the CBD with established transport infrastructure, services, and facilities, consistent with longstanding and current state and local planning strategies, such as *Melbourne 2030 - Planning for sustainable growth* and *Plan Melbourne 2017 - 2050*, that promote urban consolidation.¹⁸

The City of Maribyrnong provides an example of significant growth in apartments being constructed outside of the CBD, particularly within the Footscray Metropolitan Activity Centre, Highpoint Principal Activity Centre and in other lower order activity centres.¹⁹ The City of Maribyrnong has forecast the need for an additional 20,500 dwellings by 2031 where 'new apartment buildings will play a critical role in accommodating this growth and improved conditions for occupants will assist in creating a more liveable City.'²⁰ While population growth levels are expected to vary across Melbourne's established Local Government Areas, VIF2019 notes that strong growth can be linked to apartment construction in key activity centres, such as Box Hill in the City of Whitehorse, which is expected to grow by 14,000 people over 18 years (from 2019).²¹

1.4.2 Population and household composition

In addition to population size and growth rate, the composition of the population is an important factor in planning and development. Areas with the same population size may require different services and infrastructure depending on the population composition, specifically ages and household types.²²

15 Australian Bureau of Statistics, *Apartment living*, 2017, <<https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2071.0-2016-Main%20Features-Apartment%20Living-20>> accessed 2 March 2022.

16 Department of Environment, Land, Water and Planning, *Demand for housing*, 2021, <<https://www.planning.vic.gov.au/land-use-and-population-research/insights/demand-for-housing>> accessed 3 June 2022.

17 Ibid.

18 Department of Environment, Land, Water and Planning, *Better apartments: A discussion paper*, p. 10.

19 Maribyrnong City Council, *Submission 22*, received 29 October 2021, p. 3.

20 Ibid., p. 4.

21 Department of Environment, Land, Water and Planning, *Victoria in future 2019*, p. 9.

22 Ibid., p. 8. Note on data sources and presentation—'Estimated Resident Population data are based on the latest available estimates from the Australian Bureau of Statistics (ABS) for 30 June 2018. Household data are based on the results of 2016 Census and are only presented in detail for the base year 2016. In this document summary household figures may be quoted for 2018 and population figures may be based from 2016 for consistency with household numbers.'

The composition of Greater Melbourne's population is changing with increasing numbers of people, including families and senior people, choosing to live in apartments.²³ VIF2019 outlines the following in relation to population composition in Victoria between 2018 and 2056:

- In 2018, the median age in Victoria was 36.
- In 2018, almost two thirds of Victoria's population was within working age, between 18 and 64 years, while fewer than one of every six Victorians was aged 65 years or over.
- By 2056, the population will have aged significantly in proportional terms, particularly as the large 'baby boomer' cohort moves into the 65 years or over age group.
- By 2056, the median age is projected to increase to 41.
- By 2056, an additional 560,000 people are expected at school ages (5 to 17), though this represents a smaller proportion of the total population than in 2018.
- From 2018 to 2056, the population at older ages will increase greatly in both number and share, the number aged 65 years and over is expected to triple, and the number aged 85 years and over is projected to almost quadruple over the period.²⁴

VIF2019 projects increasing numbers of households of all types in Victoria. From 2016 to 2056, the number of households (illustrated in Figure 1.2) in Victoria is projected to almost double from 2.4 to 4.6 million.²⁵

As the population ages, older Victorians are more likely to live in a one- or two-person household than a larger household, therefore both the number and the proportion of these households is expected to increase. As a result, the average size of a household is expected to decrease from 2.54 persons per household in 2016 to 2.4 in 2056.²⁶ The number of couple-only and lone-person households are expected to double, however their share of all households is expected to increase only slightly.²⁷

Figure 1.2 illustrates the expected change in composition of households in the state between 2016 and 2056.

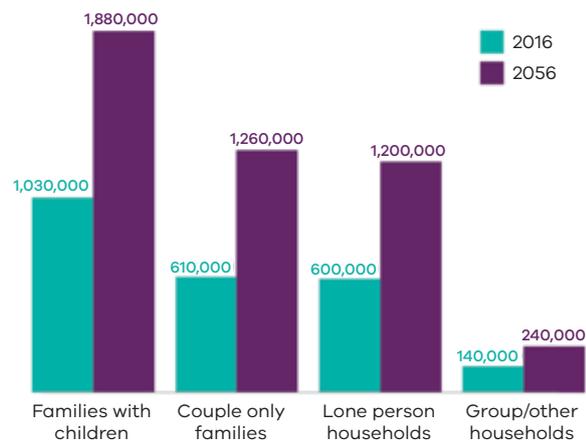
²³ Department of Environment, Land, Water and Planning, *Better apartments: A discussion paper*, p. 3.

²⁴ Department of Environment, Land, Water and Planning, *Victoria in future 2019*, p. 8.

²⁵ Ibid.

²⁶ Ibid.

²⁷ Ibid.

Figure 1.2 Households by type, Victoria 2016 and 2056

Source: Department of Environment, Land, Water and Planning, *Victoria in future 2019: Population projections 2016 to 2056*, 2019, p. 4.

As the number of households increases, the number of dwellings required to house them is required to increase accordingly. From 2016 to 2056, Victoria will require an additional 2.3 million dwellings to house the extra population: almost 1.9 million in Greater Melbourne and over 400,000 in Victoria's regions.²⁸

Changing demographics

Families with children are forecast to represent the highest rate of growth in Victorian households from 2016 to 2056.²⁹ In 2015, only 5% of apartments being constructed or marketed in Victoria included three or more bedrooms, an indication that very few new apartments were suited to the longer-term needs of households with children.³⁰

The price of apartments compared with detached and semi-detached dwellings is generally more affordable. While the Committee notes the inherent difference between apartments and detached houses, it highlights that in 2014, the median price of a 46–50 square metre, one-bedroom apartment was \$411,000, cheaper than 70% of detached houses and 58% of all existing units and flats sold throughout Greater Melbourne in 2014.³¹ The contrast between the price of apartments and detached houses in suburbs closer to the CBD is even greater. Nearly 95% of houses in city fringe suburbs in 2014 sold for more than \$411,000 (the median price of a one-bedroom apartment).³²

²⁸ Ibid.

²⁹ Ibid., p. 4.

³⁰ Department of Environment, Land, Water and Planning, *Better apartments: A discussion paper*, p. 11.

³¹ Ibid.

³² Ibid.

According to the ABS, the attached dwellings price index (which also includes units and townhouses) rose by 11.8% from December 2020–December 2021, with price rises most evident in the middle to upper (\$660,000 to \$890,000) market segments.³³

The Australian Housing and Urban Research Institute (AHURI) told the Committee of the changes in the purchase profile of apartments, which has historically been largely an investor market. This market has driven apartment supply in Melbourne in recent years ‘rather than a home owner-occupier market’.³⁴

AHURI told the Committee that the apartment market is seeing an increase in owner-occupier demand, particularly in the high-end of the market.³⁵ However, AHURI contended that increased demand has not been responded to by the market. It argued that apartments are often rented in lower income bands, making it important that certain minimum standards in apartments and location to public amenity are met.³⁶

With reference to the 2016 census, the Commissioner for Senior Victorians stated that more than one in five people living in apartments are likely to have an active interest in remaining in apartment accommodation as they grow older.³⁷ The Commissioner contended that a growing trend towards apartment living, combined with an ageing population, highlights the importance of implementing age-friendly apartment design standards to meet future cohorts of older people living in apartments.³⁸ As the number of people over the age of 60 increases, there will be a growing need for practical in-home support and care so that people can live safely and ‘age in place’ in their own homes.³⁹ The ability of older people to ‘age in place’ is reliant on both the availability of suitable housing as well as design features, such as easy entry access.⁴⁰

MAV highlighted that there are a number of key changes that should be made to the current regulation of apartment design standards, including ensuring affordable housing.⁴¹ Apartment affordability is further discussed in Section 8.5.

³³ The residential property price index is an aggregation of the established house price index and the attached dwelling price index and measures the price change in all residential dwellings within the eight Greater Capital City Statistical Areas. Australian Bureau of Statistics, *Residential Property Price Indexes: Eight Capital Cities*, 2021, <<https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/residential-property-price-indexes-eight-capital-cities/latest-release>> accessed 3 June 2022.

³⁴ Dr Tom Alves, Head of Development, Australian Housing and Urban Research Institute, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 5.

³⁵ *Ibid.*, pp. 5–6.

³⁶ *Ibid.*, p. 6.

³⁷ Commissioner for Senior Victorians, *Submission 58*, received 11 May 2022, p. 3.

³⁸ *Ibid.*, p. 4.

³⁹ *Ibid.*

⁴⁰ *Ibid.*

⁴¹ Municipal Association of Victoria, *Submission 27*, p. 8.

1.4.3 Build-to-Rent

There is also an increasing trend towards Build-to-Rent (BTR) models in Victoria. Stakeholders to the Inquiry suggested that this trend may alter future approaches to apartment living in Victoria. Project HOME stated:

other alternative development models like build to rent do challenge that investor-home relationship, with the owner having an interest in the long-term operational costs of those apartment buildings. The claims at least are that that model of development will produce better outcomes for residents as well because there is an incentive there for the developer to get it right, but that has not been proven yet in the Australian market.⁴²

Some stakeholders queried whether additional guidance and design standards need to be developed to specifically address BTR developments.⁴³ By contrast, other stakeholders warned that distinguishing BTR developments from other apartments may encourage industry to advocate for less stringent standards for these developments.⁴⁴ These stakeholders noted that this will likely have flow-on effects on the quality of the apartments and the experience of future residents. For example, DELWP reflected on its guidance for BTR models:

The position to date has been not to make a distinction, essentially, so whether a product has been built for someone to buy, it is built to rent or it is social and affordable housing that the government is delivering on, ultimately it is a dwelling someone is going to live in and so the position has been that things should be built to the standards that we have set, regardless of which of those categories it is in. Certainly at times we have had representations from industry that to provide incentives for things like build to rent a lowering of the standards would make that more appealing, but there are good reasons those standards were put in place—to protect the amenity and the health of people—and the position to date has been that regardless of what the purpose of the building or the apartment is it should comply with standards.⁴⁵

Overall, the Committee notes that families with children represent the highest rate of growth in Victorian households from 2016 to 2056. Apartments are generally more affordable, and Victoria is experiencing an increase in owner-occupier apartments, therefore there is likely to be a continued increase in the need for larger apartments to accommodate families.

1.4.4 Impact of COVID-19

The COVID-19 pandemic highlighted the need for quality housing for all Victorians. MAV stated that extended periods in lockdown highlighted the importance of apartment design for health and wellbeing, and scope for added consideration of how

⁴² Dr Megan Nethercote, Project HOME, Centre for Urban Research, School of Global, Urban and Social Studies, RMIT University, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 45.

⁴³ See, for example, Property Council of Australia, *Submission 28*, received 29 October 2021, pp. 6–7.

⁴⁴ Mr Julian Lyngcoln, Deputy Secretary, Planning, Department of Environment, Land, Water and Planning, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 57.

⁴⁵ Ibid.

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planning policy can further deliver better apartment development.⁴⁶ MAV argued that stay-at-home orders have driven cultural shifts to more people working from home, which has shed light on the need to plan for more liveable homes with more space for relaxation, ventilation and everyday living.⁴⁷

The Committee considered evidence that the COVID-19 pandemic has also highlighted possible opportunities for improvement in the current BADS, particularly in relation to windows and ventilation, as well as apartment size and general liveability.

The Committee notes that this is increasingly relevant given working from home arrangements that are likely to continue and impact future apartment design. In its submission, Project HOME highlighted research undertaken in relation to the social impacts of apartment living with an emphasis on social isolation and mental health.⁴⁸ This research included investigations of the impact that the pandemic has had on apartment living, noting that individuals living in apartments which met higher design standards coped better than those living in buildings of lesser quality.⁴⁹

Further, a recent population shift to rural and regional Victoria, particularly to regional cities, accelerated during the pandemic.⁵⁰ Housing in regional cities is often more affordable, with access to rural areas and open space. It was also noted by MAV that '[a]s regional Victoria sees rapid growth and the resulting pressure for new homes and diverse housing types, regional councils report that there is increased demand for apartment development, particularly in Ballarat and Bendigo'.⁵¹

1.5 Scope of the Inquiry

The Committee's call for submissions highlighted the Inquiry's aim of examining current apartment living standards in Victoria and how improvements could be made to apartment building developments, including communal areas.

The Committee sought community input in order to consider a wide range of matters related to amenity for residents. The Committee encouraged anyone with an interest in apartments, including industry stakeholders, owners or renters, to contribute to the Inquiry.

1.6 Key definitions

The Committee established key definitions from various resources, including materials produced by the Victorian Government, to best guide its analysis of the evidence.

⁴⁶ Municipal Association of Victoria, *Submission 27*, p. 5.

⁴⁷ *Ibid.*, p. 8.

⁴⁸ Project HOME, *Submission 43*, received 31 October 2021, pp. 10-11.

⁴⁹ *Ibid.*, pp. 3,12.

⁵⁰ Municipal Association of Victoria, *Submission 27*, p. 7.

⁵¹ *Ibid.*

1.6.1 Apartment and apartment development

In the *Apartment Design Guidelines for Victoria* (2017), DELWP defines an apartment as ‘a dwelling located above the ceiling level or below the floor level of another dwelling and is part of a building containing two or more dwellings’.⁵² A dwelling is then defined as ‘a building used as a self-contained residence which must include a kitchen sink, food preparation facilities, a bath or shower, and a closet pan and wash basin. It includes outbuildings and works normal to a dwelling’.⁵³

According to DELWP, an apartment building, or development, comprises several such dwellings. An apartment building can have other uses, such as retail or commercial premises, often on the ground floor.⁵⁴ The ABS 2016 census defines low-rise apartment buildings as up to four storeys. Apartment buildings over four storeys are considered as mid- or high-rise.⁵⁵ The ABS definition of low-rise and mid- or high-rise apartment buildings is adopted in BADS.⁵⁶

DELWP outlines the common types of apartments as:

- studio apartments, characterised by a single, multi-use space and which do not have a separate bedroom
- student or serviced apartments, usually smaller than other apartments and designed to serve a particular purpose
- one-, two- or three-bedroom apartments, which typically have separate bedrooms each with space for a double bed and clothes storage.⁵⁷

1.6.2 Liveability

Through the updated BADS Guidelines (2021), DELWP contends that ‘Victorians want high-quality, liveable, attractive apartments’, and that the aim of the guidelines is ‘to achieve quality, liveable and attractive apartment buildings that increase green canopy cover in urban areas and contribute positively to the neighbourhood’.⁵⁸

According to AHURI, liveability for apartment residents relates to the immediate physical infrastructure that is a dwelling as well as ‘the wider cultural, economic, and social infrastructures that make living in that space enjoyable and meaningful’.⁵⁹ As noted by DELWP, ‘*Plan Melbourne 2017–2050* is the Victorian Government’s long-term plan to ensure Melbourne remains liveable, sustainable and accessible to

⁵² Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, 2017, p. 77.

⁵³ Ibid.

⁵⁴ Department of Environment, Land, Water and Planning, *Better apartments: A discussion paper*, p. 9.

⁵⁵ Ibid.

⁵⁶ Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, 2021.

⁵⁷ Department of Environment, Land, Water and Planning, *Better apartments: A discussion paper*, p. 9.

⁵⁸ Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, p. 4.

⁵⁹ Australian Housing and Urban Research Institute, *Submission 49*, received 31 October 2021, p. 5.

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people of all ages and abilities.⁶⁰ The strategy is guided by the principle of ‘20-minute neighbourhoods’, which are liveable places where people can access most of their daily needs locally without a car.⁶¹

The 20-minute neighbourhood aims to give people the ability to meet most of their daily needs (such as schools, services, parks and fresh food) within a 20-minute walk from home, with safe cycling and local transport options.⁶² The *Plan Melbourne Five-Year Implementation Plan* establishes actions to drive Melbourne as a sustainable, competitive and liveable city. DELWP is the lead agency for delivering ‘Action 75: Whole-of-government approach to 20-minute neighbourhoods’.⁶³

Plan Melbourne outlines that ‘neighbourhoods that are poorly connected, with an absence of spaces that allow people to come together, have high rates of social isolation and loneliness, which are being increasingly understood as public health issues’.⁶⁴ It also highlights that comfortable and safe communities are places that foster social cohesion, a sense of belonging, and ownership.⁶⁵

1.6.3 Good design

The Committee acknowledges that a universal or ‘one size fits all’ definition of good design does not necessarily exist for apartments or apartment developments. The Australian Institute of Architects (AIA) told the Committee that the qualitative aspects of good design are difficult to codify and referred to the important role design review panels (discussed in Section 8.1.2) can have.⁶⁶

With consideration to the evidence provided and research undertaken as part of the Inquiry, the Committee summarised below the relevant elements that would inform good design in Victoria. Good design in the context of the evidence encompasses not only the design of an individual apartment and apartment building but also the planning and design of the surrounding neighbourhood.

The OVGA’s *The Case for Good Design: A guide for government* describes good design as central to ensuring the provision of quality housing.⁶⁷ The OVGA states that good design can balance competing needs, and results in the optimisation of budget, running costs, location, appearance, and satisfaction.⁶⁸ The OVGA provides guidance on the following factors as key to contributing to good design:

60 Department of Environment, Land, Water and Planning, *20-minute neighbourhoods: Creating a more liveable Melbourne*, 2019, p. 1.

61 Ibid.

62 Ibid., p. 4.

63 Department of Environment, Land, Water and Planning, *Plan Melbourne: 2017–2050: Five-year implementation plan*, 2019, p. 26.

64 Department of Environment, Land, Water and Planning, *20-minute neighbourhoods*, p. 14.

65 Ibid.

66 Ms Sarah Buckeridge, Co-managing Director, Hayball, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 28.

67 Office of the Victorian Government Architect, *The case for good design: A guide for government*, 2019, p. 39.

68 Ibid., p. 44.

- sun and light
- thermal comfort
- performance and sustainability
- connections to nature and outlook
- privacy and noise
- flexibility and adaptability
- safety
- amenity and comfort
- communal spaces.⁶⁹

The Committee notes that these elements are considered in BADS to differing degrees, as discussed in Chapters 5 and 6.

Research presented by Infrastructure Victoria in their *30 Year Strategy Engagement Report (Stage One and Two) (2020)* outlines that following extensive community engagement, there was no agreement about what good design was, with most participants stating their concern was with quality and standards.⁷⁰ AIA pointed to New South Wales's *State Environment Planning Policy No 65 (SEPP 65)* as articulating good design.⁷¹ SEPP 65 is outlined in further detail in Section 3.1.1 of this report.

The Committee heard throughout its Inquiry of the importance of the design of neighbourhoods surrounding apartments. *Plan Melbourne* considers elements of good design that support a connected and healthy community are neighbourhoods with:

- increased housing diversity
- greater street connectivity and more accessible destinations
- walkability
- a built environment that supports communities to be healthy and active.⁷²

FINDING 1: The Committee considers there are a number of factors that contribute to good design of both individual apartments and apartment developments, including: sun and light, thermal comfort, performance and sustainability, connections to nature and outlook, privacy and noise, flexibility and adaptability, safety, amenity and comfort, neighbourhood amenity and communal spaces.

⁶⁹ Ibid., pp. 40–45.

⁷⁰ Infrastructure Victoria, *Infrastructure Victoria 30-year strategy engagement report (stage one and two)*, 2020, p. 5.

⁷¹ Ms Sarah Buckeridge, *Transcript of evidence*, p. 28.

⁷² Department of Environment, Land, Water and Planning, *20-minute neighbourhoods*, p. 14.

Current regulation of apartment design standards

This chapter outlines the relevant intersecting regulatory arrangements at Commonwealth, state and local government levels, while also providing a brief overview of the key stakeholders involved in this area.

In examining the *Better Apartments Design Standards* (BADs) issued by the Victorian Government in 2017 and updated in 2021, this chapter highlights a number of foundational challenges underpinning the Standards, including the tension between performance and prescription-based modes of regulation in apartment design and the relationship between the planning and building stages of the apartment development process.

2.1 Governance arrangements and key stakeholders

There are key regulatory oversight mechanisms guiding apartment design at all government levels.

2.1.1 Commonwealth

At the Commonwealth level, the National Construction Code (NCC) is Australia's primary instrument for the design and construction of buildings and structures. It contains nationally consistent minimum standards on areas such as structural safety, fire safety, accessibility, ventilation, room heights and energy efficiency. Adopted by each jurisdiction through state building legislation, in Victoria, the NCC is adopted through the *Building Regulations 2018*, which is subordinate legislation under the *Building Act 1993*.¹ While the NCC standards are agreed to at a national level, implementation of the NCC is governed by each jurisdiction's own laws.

2.1.2 Victoria

Victorian Government arrangements governing apartment design are overseen primarily by the Department of Environment, Land, Water and Planning (DELWP). The *Victoria Planning Provisions* (VPPs) contain planning policies and controls for land use planning, including for residential development. It is under the VPPs that BADs have been adopted, as discussed in Section 2.2 below.

¹ Victorian Building Authority, *Building regulatory framework*, <<https://www.vba.vic.gov.au/building/regulatory-framework>> accessed 27 May 2022.

Other relevant state-wide documents include:

- *Plan Melbourne 2017–2050*—which is the metropolitan planning strategy for Melbourne’s growth over the next three decades
- *Victoria’s infrastructure strategy 2021–2051*—which deals with infrastructure challenges for the state including in land use and infrastructure planning.

DELWP indicated to the Committee that apartments play a central role in *Plan Melbourne’s* long-term vision for the city, and almost two-thirds of the extra dwellings needed are expected to be accommodated in Melbourne’s established inner and middle suburbs—‘locations where apartments are a very important part of the housing mix’.²

The Victorian Planning Authority (VPA) is a statutory authority with relevant planning responsibilities including to support productivity, liveability, housing affordability and environmental quality, and to promote the supply of housing.³ The VPA noted that its interest in apartment design largely lies in consideration of the ‘public realm’ at the precinct level for issues such as strategic planning and zoning.⁴

Infrastructure Victoria (IV) is an independent advisory body, responsible for *Victoria’s infrastructure strategy 2021–2051*. The strategy highlighted the concept of ‘density done well’ in planning for the growth of new homes across Victorian suburbs. At the public hearings, IV suggested that apartments play a key role in its consideration of greater density:

This is where we start to see the intersection then between infrastructure planning and apartment design, because with that greater density, much of that density is going to come in apartments that are being delivered in areas that have got often really good public transport infrastructure but also other utilities that can be relatively cheaply and easily improved and upgraded to meet that demand.⁵

The Victorian Building Authority (VBA) regulates Victoria’s building industry under the *Building Act 1993*, including compliance with the NCC within Victoria. Its primary focus in apartment design is ensuring that Victoria ‘has well-built apartment buildings for residents now and into the future’, designed with accessibility, safety and essential safety measures (ESMs) in mind.⁶ It should also be noted that there is currently a wide review of Victoria’s building regulatory system being undertaken by an Expert Panel chaired by the Commissioner for Better Regulation.⁷

² Mr Julian Lyngcoln, Deputy Secretary, Planning, Department of Environment, Land, Water and Planning, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, pp. 48–49.

³ *Victorian Planning Authority Act 2017* (Vic), s 7(2).

⁴ Ms Rachel Dapiran, Executive Director, Infrastructure, Strategy and Planning, Victorian Planning Authority, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 12.

⁵ Dr Jonathan Spear, Acting Chief Executive Officer, Infrastructure Victoria., Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 2.

⁶ Victorian Building Authority, *Submission 23*, received 29 October 2021, p. 2.

⁷ See Victorian Government, *Building system review*, <<https://www.vic.gov.au/building-system-review>> accessed 27 May 2022.

The Office of the Victorian Government Architect (OVGA) provides strategic advice to the Victorian Government about architecture and urban design, and advocates for high-quality design outcomes in Victoria. It has had a vital role in the development of apartment design standards, as explained in Section 2.2, and in various innovations in this area such as through the formation of its Victorian Design Review Panel. Design review panels are discussed further in Section 8.1.2 of this report.

FINDING 2: While the Department of Environment, Land, Water and Planning has primary oversight responsibilities for apartment design standards, a number of State Government agencies, including the Victoria Planning Authority and the Office of the Victorian Government Architect, are also involved in the process.

2.1.3 Local government

Local councils in Victoria perform a central role in planning and building functions, including to undertake planning application assessments and issue planning permits. At the public hearings, the Municipal Association of Victoria (MAV) emphasised the role local councils have in formulating apartment design standards.⁸ As an example, MAV highlighted work done by the Moreland City Council to develop the *Moreland Apartment Design Code*, prior to the adoption of state-wide apartment design standards in the VPPs.⁹

The importance of collaboration and consultation between state government and local councils was emphasised throughout the Committee's Inquiry. MAV considered that collaboration and partnership with councils is key because councils 'possess detailed technical knowledge on how planning and design for better apartments can deliver better homes.'¹⁰ In elaborating on this, MAV noted that collaboration is needed now more than ever at a time where housing affordability has worsened, and the pandemic has sharpened the demand for comfortable homes. It also noted that councils can identify issues early in the process as they administer the vast majority of planning permit applications for apartment developments.¹¹

2.1.4 Other stakeholders

The development industry is an important stakeholder, represented in this Inquiry by various entities. The Housing Industry Association (HIA) is Australia's national body representing the residential building industry. The Property Council of Australia (PCA) is the leading advocate for Australia's property industry. The Urban Development Institute of Australia, Victorian Division (UDIA Victoria) also submitted to the Inquiry as the peak industry body for the urban development industry.

⁸ Mr James McLean, Senior Policy Adviser, Natural and Built Environment, Municipal Association of Victoria, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, p. 2.

⁹ Ibid.

¹⁰ Municipal Association of Victoria, *Submission 27*, received 29 October 2021, p. 12.

¹¹ Mr James McLean, *Transcript of evidence*, p. 2.

Owners and residents' associations also took part in this Inquiry and provided views from their lived experience on apartment design representing users living in and around apartment developments. Research institutes and professional representative groups can also play a role in apartment design considerations and provided expert information on implementation of these policies on the ground. The Committee also heard from a number of individuals during the Inquiry and believes that individual voices are essential to understanding how Victorians experience apartment design.

The Committee supports MAV's submission that consultation, as a key component of Victoria's planning system, must be reinforced and strengthened to deal with the coming housing challenges facing the state. It was pleased with broad representation across all stakeholder groups in this Inquiry, which brought a diversity of views and allowed the Committee to consider apartment development design from different perspectives.

FINDING 3: Collaboration between local councils and State Government, and the community, is a foundational aspect to the apartment design planning approach of Victoria.

2.2 The Better Apartments Design Standards

Until the development of BADS, there were limited planning regulations in place for apartment design in Victoria.¹² While the VPPs did provide some guidance for medium density housing up to four storeys and referenced the *Guidelines for Higher Density Residential Development*, the Committee was advised that these 'did not address specifically issues that pertain to the design, amenity, or performance of apartments'.¹³ The only applicable regulatory scheme was found under the NCC.

Research commissioned by the OVGA in 2013–14 identified a need to improve the quality of apartment design in Victoria, revealing key concerns in apartment buildings including widespread existence of single-aspect south-facing apartments, rooms and corridors with little or no access to natural light, poor natural ventilation, too many apartments per level, and buildings that were in close proximity to adjoining developments.¹⁴ The OVGA and DELWP undertook an extensive consultation process to develop BADS in consultation with the public and with groups including the City of Melbourne, MAV, and the PCA.¹⁵

¹² David Allouf, Andrew Martel and Alan March, 'Discretion versus prescription: Assessing the spatial impact of design regulations in apartments in Australia', *Environment and Planning B: Urban Analytics and City Science*, vol. 47, no. 7, 2020, p. 1260.

¹³ Dr Tom Alves, Head of Development, Australian Housing and Urban Research Institute, *Submission 50*, received 31 October 2021, p. 4.

¹⁴ Mr David Islip, Principal Adviser, Urban Design and Architecture, Office of the Victorian Government Architect, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 39.

¹⁵ Ibid.

Adopted in 2017, and applying to all apartment developments in Victoria, BADS was incorporated into the VPPs through Clauses 55 and 58, accompanied by the *Apartment Design Guidelines for Victoria* to provide additional explanation of the standards. DELWP advised that there are three phases in its work on BADS.¹⁶

The initial BADS focused on the internal liveability of apartments for residents, and thus focused on 16 standards:

- the siting and building arrangement—including building setback, communal open space and landscaping requirements
- building performance—including noise impacts, energy efficiency, and waste and recycling
- dwelling amenity—including functional layout, room depth, windows, natural ventilation and accessibility.¹⁷

The second phase of DELWP's work, beginning in 2018, focused more on external controls to improve apartment design in relation to their surrounding neighbourhoods. While consultation on these issues was underway when the Inquiry began, updated BADS were issued in February 2021 and focused on:

- green space through landscaped communal open space
- building materials for high-quality building facades
- safe and useable street frontages
- preventing the generation of excessive gusts of wind from tall buildings
- private open space through balcony design and location.¹⁸

The third phase is the *Future Homes* project, which uses the first two phases to demonstrate the future of apartment design through design plan packages and other tools.¹⁹

The specific content of BADS is addressed throughout this report, and areas for improvement in relation to dwelling amenity, building amenity and performance, and external amenity are addressed in Chapters 5, 6 and 7 of this report, respectively.

Many stakeholders were commendatory of BADS as an effort to lift the quality of apartment design across the industry and create minimum standards.²⁰ Applauding both the creation of BADS and the recent update, the Council Alliance for a Sustainable

¹⁶ Mr Julian Lyngcoln, *Transcript of evidence*, p. 49.

¹⁷ Department of Environment, Land, Water and Planning, *Better apartments*, supplementary evidence received 16 February 2022, p. 5.

¹⁸ Department of Environment, Land, Water and Planning, *Submission 20*, received 28 October 2021, p. 2.

¹⁹ Mr Julian Lyngcoln, *Transcript of evidence*, p. 50.

²⁰ Ms Sarah Buckeridge, Co-managing Director, Hayball, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 27; Municipal Association of Victoria, *Submission 27*, p. 6; Office of the Victorian Government Architect, *Submission 16*, received 27 October 2021, p. 1; Mr David Islip, *Transcript of evidence*, p. 39.

Built Environment (CASBE) noted that ‘apartment design standards have generally delivered improved apartment amenity and lifted the overall design of the new apartment developments.’²¹ UDIA Victoria considered that, while the market itself was already making changes to improve apartment design, BADS helped to solve problems ‘at the lowest end of the market’ and ‘probably shifted it to a greater degree and a little bit quicker’ than if the standards did not come into place.²² The City of Melbourne, appearing with a number of other councils, noted consensus among councils that BADS created significant improvement, but also that more work is required to protect residents and improve apartment quality.²³

Some stakeholders emphasised that BADS has not been in place for long enough to make informed assessments about its impacts.²⁴ Representatives appearing with the PCA advised the Committee that due to approval times sitting between 12 to 18 months, and another two years for delivery, ‘there has only been a small window of time for those properties delivered under that BADS planning framework to take effect’.²⁵ In its submission, the PCA outlined that there is no strong data regarding the impact of BADS in delivering high quality apartments, and ‘many of the recent changes to requirements have not yet firmly been evidenced through practical completion of new apartments’.²⁶

Linked to the discussion of the impact of BADS so far in Victoria is the issue of whether apartment design issues should be considered within planning mechanisms at all or should be restricted to the building stage under the NCC. Industry stakeholders, such as the HIA, believed that many similar requirements are mandated under the NCC and questioned the need for planning regulations to also regulate these areas:

HIA does not support technical regulation being introduced into the planning system in any capacity. It is considered of vital importance that a clear separation is kept between matters governed by the planning regulatory environment and the technical, building regulatory environment which is provided through the National Construction Code.²⁷

Other stakeholders considered that the NCC had not been implemented effectively enough to limit sub-optimal apartment design on its own. Project HOME noted that before BADS some apartment blocks had up to 30% of the bedrooms without windows, and the role of the BADS regulation was to ‘take away that option of doing poor design’.²⁸ The Australian Housing and Urban Research Institute (AHURI) noted that

21 Ms Natasha Palich, Executive Officer, Council Alliance for a Sustainable Built Environment, Public hearing, Melbourne, 15 November 2022, *Transcript of evidence*, p. 3.

22 Mr Matthew Kandelaars, Chief Executive Officer, Urban Development Institute of Australia, Victorian Division, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, p. 48.

23 Ms Bronwen Hamilton, Design Manager and Principal Urban Designer, City of Melbourne, Public hearing, Melbourne, 15 November 2022, *Transcript of evidence*, pp. 12-13.

24 Mr Ashley Williams, Board Member, Urban Development Institute of Australia, Victorian Division, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, p. 49.

25 Mr Daniel Dugina, General Manager Operations, Apartments, Development, Lendlease, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, p. 41.

26 Property Council of Australia, *Submission 28*, received 29 October 2021, p. 5.

27 Housing Industry Association, *Submission 38*, received 30 October 2021, p. 7.

28 Dr Andrew Martel, Project HOME, Centre for Urban Research, School of Global, Urban and Social Studies, RMIT University, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 41.

while the NCC did cover issues such as noise transfer before BADS was introduced, the NCC provisions were not functioning as intended and ‘every other jurisdiction had dealt with that in one way or another through different acts and different ways’.²⁹ The OVGA considered that when the NCC was the only regulation covering apartment design, ‘[q]uality was significantly impacted by a market-led outcome focused on yield and return, and many local governments at the coalface were struggling with the quality of apartments being approved’.³⁰

On balance, the Committee agrees that BADS has a unique and important role to play in regulating apartment design and improving quality, filling a gap that previously allowed sub-optimal apartment designs to be approved. There is no empirical evidence yet regarding the impact of BADS as an appropriate period of time has not yet passed to assess its impact, but anecdotal evidence suggests that it is helping to raise standards, particularly at the lower end of the market. While the NCC remains the central regulatory environment for developments, the Committee considers that having BADS in place strengthens the standard of apartment design from the beginning of the development process. This should have a positive effect all the way through the design and construction phases.

FINDING 4: While an appropriate period of time has not yet passed to assess the impact of the *Better Apartment Design Standards* (BADS), early evidence suggests it may have contributed to lifting the quality of apartment design across the industry. BADS is a useful additional tool to the requirements of the National Construction Code.

2.3 Prescriptive vs performance-based systems for apartment design

A consistent theme across all areas of the Inquiry was the benefit of prescriptive or performance (or discretionary) systems for apartment design. Performance-based control systems formulate indicative, rather than mandatory, policy standards as they acknowledge the likelihood of unforeseen circumstances in the development process. They rely on discretion by decision-makers in judging applications for apartment developments. A prescriptive regulatory system, on the other hand, is rigid in applying measurable criteria to assess a development and does not involve discretion applied by decision-makers.³¹

²⁹ Dr Tom Alves, Head of Development, Australian Housing and Urban Research Institute, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 7.

³⁰ Mr David Islip, *Transcript of evidence*, p. 39.

³¹ Allouf, Martel and March, ‘Discretion versus prescription: Assessing the spatial impact of design regulations in apartments in Australia’, p. 1263.

BADS adopts a performance-based approach, using ‘the same performance based approach currently used to assess residential development in the *Victoria Planning Provisions*’ more generally.³² Structurally, the Standards contain three elements:

- An objective—this describes the desired outcomes for the completed development.
- The standard—this describes the requirements that should normally be met to achieve the objective, although alternative design solutions may also be considered by the responsible authority (usually the local council).
- Decision guidelines—these set out the matters that the responsible authority must consider in determining an application, including for alternative design solutions proposed.³³

As noted by DELWP at the public hearings, the performance-based approach ‘left room for industry to innovate, to deliver on outcomes, but they did put controls in place that required developments to produce outcomes’.³⁴

Some stakeholders advocated for a more prescriptive approach to be adopted.³⁵ The Darebin Appropriate Development Association contended that ‘good architects and designers relish the challenge of working with restrictive criteria’ and implored the Committee to ‘provide a baseline for minimum standards for better liveability in apartment design which cannot be breached or traded off’.³⁶

Others considered that a flexible approach is preferable.³⁷ HIA considered that prescription is not appropriate given the nature of apartment developments:

As apartment buildings are often required to be constructed on heavily constrained sites—those typically being dense urban environments with built-form constraints on each boundary—it is not appropriate that planning and building regulation be written in a prescriptive and/or mandatory form. In order to achieve an efficient and effective use of the site and achieve an optimal design outcome, planning and building regulation must be written such to allow a tailored design response depending on the particular features of the site and the surrounds and allow for a range of apartments at different price points.³⁸

³² Department of Environment, Land, Water and Planning, *Better Apartments Design Standards: New apartment design standards for Victoria*, 2016, p. 7.

³³ Ibid.

³⁴ Mr Julian Lyngcoln, *Transcript of evidence*, p. 49.

³⁵ Dr Megan Nethercote, Project HOME, Centre for Urban Research, School of Global, Urban and Social Studies, RMIT University, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 43; Ms Bronwen Hamilton, *Transcript of evidence*, p. 27.

³⁶ Ms Maria Poletti, President, Darebin Appropriate Development Association, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 50.

³⁷ Mr Ashley Williams, *Transcript of evidence*, p. 49.

³⁸ Mr Mike Hermon, Executive Director, Planning and Development, Housing Industry Association, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, p. 31.

MAV agreed that performance-based approaches preserve innovation, stating that ‘a performance-based planning system that enables design standards to be set, all while still allowing for some innovation, must continue’.³⁹ It was also argued that while BADS is performance-based, local councils interpret the standards in a more rigid way than intended. The PCA suggested that ‘they can often be enforced as a mandatory standard when there should be a little bit more flexibility to allow innovation and creativity’, which can also result in additional costs and affordability pressure.⁴⁰

Ultimately, most discussions acknowledged that a balance should be struck between setting flexible standards and ensuring a baseline is met. MAV noted that ‘[g]etting the balance right is always going to be a tension. The Victorian planning system ... is built on those sorts of tensions.’⁴¹ It also noted the potential need for clearer language to communicate expected standards.⁴² AHURI agreed with this, stating that ‘we have to sort of find the way to actually work with the tension, and I think that is okay’.⁴³ Similarly, the Australian Institute of Architects (AIA) noted this balance:

The AIA recommends that future iterations of the standards balance prescriptive planning—typically these are metrics that can be easily measured and assessed to achieve minimum standard—and performance-based approaches, which allow consideration of more nuanced qualitative design issues and non-standard solutions.⁴⁴

This view was also reiterated by DELWP, which noted its aim to achieve ‘a minimum standard that is acceptable to the community and acceptable to occupants’ while also allowing innovation.⁴⁵

FINDING 5: The Committee agrees a largely performance-based approach is in line with other areas of residential development planning and should continue in the interests of ensuring consistency for the industry.

FINDING 6: Notwithstanding Finding 4, there is evidence from the Inquiry to suggest that some prescription, including minimum apartment size, can lead to improved outcomes in apartment design.

³⁹ Mr James McLean, *Transcript of evidence*, p. 2.

⁴⁰ Mr Daniel Dugina, *Transcript of evidence*, p. 41.

⁴¹ Mr James McLean, *Transcript of evidence*, p. 6.

⁴² *Ibid.*, pp. 6–7.

⁴³ Dr Tom Alves, *Transcript of evidence*, p. 10.

⁴⁴ Ms Sarah Buckeridge, *Transcript of evidence*, p. 27.

⁴⁵ Mr Julian Lyngcoln, *Transcript of evidence*, p. 51.

PART II

3 Australian jurisdictions

3

This chapter examines the governance and regulation of apartment design standards in three Australian jurisdictions. The Committee chose to examine New South Wales (NSW), Western Australia (WA) and South Australia (SA) as they were commonly identified in evidence throughout the Inquiry. In assessing the relevant arrangements in these jurisdictions, the chapter also examines their adaptability to the Victorian context. The Committee focussed primarily on NSW, given the prevalence of apartment living in the state, and the corresponding depth of regulation and governance around apartment design standards.

3.1 New South Wales

Throughout the Committee's Inquiry, NSW was often mentioned as a proactive jurisdiction in governance and regulation of apartment design standards. NSW was the first Australian jurisdiction to implement specific apartment design standards and is largely considered to have an effective apartment design standards framework. The Committee considered a range of evidence suggesting NSW has a comprehensive model, with clear roles and responsibilities backed by an effective legislative framework, and guidance around its implementation.¹

In 2016, it was estimated that 47% of Australia's occupied apartments were located in NSW, while approximately 21% of all NSW residents lived in apartments.² Given the prevalence of apartment living, along with the concentration of apartments throughout the state, the issue of apartment design standards has experienced extensive attention.

The Committee notes that NSW uses both prescription and performance-based approaches to apartment design standards.

3.1.1 Governance and regulation of apartment design standards

Apartment design regulation is administered under the NSW Government's Planning and Environment Portfolio. Since 2002, apartment design in NSW has been primarily regulated under the *State Environmental Planning Policy No 65 – Design Quality of*

¹ Dr Tom Alves, Head of Development, Australian Housing and Urban Research Institute, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 3.

² Australian Bureau of Statistics, *Apartment living*, 2017, <<https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2071.0-2016-Main%20Features-Apartment%20Living-20>> accessed 2 March 2022.

Residential Apartment Development (SEPP 65). Most governance and regulation arrangements around apartment design standards are broadly contained within SEPP 65, which also sets out the NSW Government's policy direction for residential apartment development.³

NSW also adopts a legislative approach to apartment design standards with enforceable consequences for non-compliance. Failure to comply with the requirements of SEPP 65 may incur certain penalties and offences under the *Environment Planning and Assessment Act 2003* (NSW).⁴

A number of stakeholders involved in the Inquiry suggested that Victoria can learn from NSW's approach to apartment design standards.⁵

State Environmental Planning Policy No 65

SEPP 65 sets out the NSW Government's policy direction for residential apartment development in NSW.⁶ The policy aims to deliver better living environments for residents of apartments. It seeks to establish a consistent approach to the design and assessment of apartments, including the way they are assessed by councils.⁷ While SEPP 65 was initially implemented in 2002, it has been progressively updated following several reviews.⁸

The Committee heard evidence from several stakeholders around the benefits of the policy, including from the Australian Institute of Architects (AIA), which told the Committee that SEPP 65 is 'particularly effective in articulating principles of good design and integrating macro to micro design, place and sustainability considerations into a single and comprehensive planning policy'.⁹

In order to encourage a more consistent approach to apartment design standards, SEPP 65 sets out a number of relevant design quality principles, including:

- Context and neighbourhood character
- Built form and scale
- Density
- Sustainability

³ NSW Department of Planning and Environment, *Apartment design guide: Tools for improving the design of residential apartment development*, 2015, p. 8.

⁴ *Environment Planning and Assessment Act 2003* (NSW), divs 9.5 and 9.6.

⁵ Property Council of Australia, *Submission 28*, received 29 October 2021, p. 7; Darebin City Council, *Submission 40*, received 31 October 2021, pp. 12-13, 17; Dr Tom Alves, Head of Development, Australian Housing and Urban Research Institute, *Submission 50*, received 31 October 2021, pp. 5, 12.

⁶ NSW Department of Planning and Environment, *Apartment design guide*, p. 8.

⁷ NSW Department of Planning and Environment, *Better apartments*, 2021, <<https://www.planning.nsw.gov.au/Policy-and-Legislation/Housing/Better-Apartments>> accessed 6 June 2022.

⁸ Ibid.

⁹ Ms Sarah Buckeridge, Co-managing Director, Hayball, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 28.

- Landscape
- Amenity
- Safety
- Housing diversity and social interaction
- Aesthetics.¹⁰

The Australian Housing and Urban Research Institute (AHURI) told the Committee that SEPP 65 is a comprehensive and effective model, outlining that:

it understands the issues and it introduces regulatory responses to those issues and guidance for how they are applied in development. But it is also very cognisant of the actual development process as well, so the planning assessment process and the development assessment process, and it ensures that the application of design principles, which are clearly articulated, carries through that system.¹¹

At the public hearings, the Department of Environment, Land, Water and Planning (DELWP) told the Committee that SEPP 65 was considered during the development of the *Better Apartment Design Standards* (BADs). In explaining the impact the policy had on Victoria, DELWP explained that:

In terms of why we just did not adopt that and ended up with the standards we did, there were probably a few things that played into that. One was probably a stronger approach we took around performance based rather than prescriptive. One was concern raised by industry about the costs that would be added to apartments by implementing all of the standards that were in SEPP 65. And we did quite a lot of modelling to look at actually specific standards, how much each of those would impact on cost—and obviously affordability is an issue that we are concerned about—and to what benefit.¹²

The Committee notes the concerns outlined by the department, particularly those around the use of prescriptive measures. However, it also notes comments made by the Office of the Victorian Government Architect (OVGA), which describe SEPP 65 as the ‘gold standard’.¹³

FINDING 7: New South Wales’s (NSW) *State Environmental Planning Policy No 65*, which sets out the NSW Government’s policy direction for residential apartment development, is broadly considered to be an effective and consistent policy around apartment design standards.

¹⁰ State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development (2002 EPI 530) sch 1.

¹¹ Dr Tom Alves, *Transcript of evidence*, p. 3.

¹² Mr Julian Lyngcoln, Deputy Secretary, Planning, Department of Environment, Land, Water and Planning, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 55.

¹³ Mr David Islip, Principal Adviser, Urban Design and Architecture, Office of the Victorian Government Architect, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 45.

Design and Place State Environmental Planning Policy (DP SEPP)

Following a 2021 review, the NSW Department of Planning and Environment announced plans to replace SEPP 65 with the *State Environmental Planning Policy (Design and Place) 2021 (DP SEPP)* along with other planning system reforms. DP SEPP aligned with broader plans to simplify the NSW planning system and was accompanied by corresponding updates to the *Apartment Design Guide*.¹⁴ The AIA told the Committee that the DP SEPP presented a more robust framework with enhanced guidance and a consistent approach throughout.¹⁵

The Committee notes that while SEPP 65 is focused on residential development, DP SEPP was intended to mandate design standards for a wider range of development categories. The DP SEPP mandated a 'principle based' approach to the assessment process with the introduction of five overarching design principles, matched with ten design considerations.¹⁶ The design principles consisted of:

- deliver beauty and amenity to create a sense of belonging for people
- deliver inviting public spaces and enhanced public life to create engaged communities
- promote productive and connected places to enable communities to thrive
- deliver sustainable and greener places to ensure the well-being of people and the environment
- deliver resilient, diverse places for enduring communities.¹⁷

On 5 April 2022, the NSW Minister for Planning announced that DP SEPP would be abandoned.¹⁸ DP SEPP was to be implemented in mid-2022, with a transitional period meaning it would not have come into effect until the end of 2022.¹⁹ It is unclear to the Committee whether any elements of the policy will be implemented.

Apartment Design Guide

Since 2015, SEPP 65 has been supplemented by the *Apartment Design Guide* (the Guide).²⁰ The Guide aims to improve the design and planning of residential apartment development. It provides benchmarks around the design and assessment of residential

¹⁴ NSW Department of Planning and Environment, *Design and Place SEPP – Public Exhibition*, <<https://web.archive.org/web/20220309122939/https://www.planning.nsw.gov.au/Policy-and-Legislation/State-Environmental-Planning-Policies/Design-and-Place-State-Environmental-Planning-Policy>> accessed 6 June 2022.

¹⁵ Ms Sarah Buckeridge, *Transcript of evidence*, p. 31.

¹⁶ Felicity Rourke, et al., 'Update on the Draft Design and Place SEPP', *Allens*, 1 March 2022, <<https://www.allens.com.au/insights-news/insights/2022/03/Update-on-the-Draft-Design-and-Place-SEPP>> accessed 6 June 2022.

¹⁷ NSW Department of Planning and Environment, *Business Zone Design Guide*, 2021, pp. 11–13.

¹⁸ NSW Department of Planning and Environment, *More homes and liveable communities for NSW*, 2022, <<https://www.dpie.nsw.gov.au/news-and-events/articles/2022/more-homes-and-liveable-communities-for-nsw>> accessed 6 June 2022.

¹⁹ Rourke, et al., 'Update on the Draft Design and Place SEPP'.

²⁰ NSW Department of Planning and Environment, *Apartment design guide*.

apartment development.²¹ It also acts as a resource for pre-development application, which advocates early discussions on the design and planning process.²² Overall, the Guide aims to:

- deliver better quality design for buildings
- improve liveability through enhanced apartment amenity
- improve sustainability through better traffic and transport solutions
- improve the relationship of apartments to the public domain
- deliver design guidance
- provide improved guidance to local councils.²³

The content is given statutory force under Clause 6A of SEPP 65. This has the effect of nullifying provisions in development control plans which do not comply with the Guide.

The introduction of DP SEPP would have made a number of amendments to the Guide, including a 'legal test requiring consent authorities to be satisfied the development 'meets the objectives' of the [Apartment Design Guide]'.²⁴ DP SEPP would have also included provisions to allow for departures from the Guide in certain circumstances.²⁵

Some stakeholders, including the OVGA, outlined that the use of SEPP 65 in tandem with the *Apartment Design Guide* in NSW sets a strong precedent around the regulation and governance of apartment design standards.²⁶

Mixed performance-based and prescriptive approach

While stakeholders involved in the Inquiry were at times divided on the classification of NSW's approach to regulating and governing apartment design standards, the Committee found its approach can be classified as a mixed performance-based and prescriptive approach, leaning more towards increased prescription.

The Victorian Planning Authority (VPA) told the Committee that in comparing NSW design guidelines to Victoria, NSW adopts a more prescriptive approach.²⁷ Other witnesses, including DELWP, also told the Committee that NSW adopts a prescriptive approach to design standards.²⁸

²¹ Ibid., p. 8.

²² Ibid., p. 12.

²³ Ibid., p. 8.

²⁴ Rourke, et al., 'Update on the Draft Design and Place SEPP'.

²⁵ Ibid.

²⁶ Office of the Victorian Government Architect, *Submission 16*, received 27 October 2021, p. 1.

²⁷ Ms Goksel Karpat, Urban Design Advisor, Victorian Planning Authority, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 14.

²⁸ Mr Julian Lyngcoln, *Transcript of evidence*, p. 55.

The VPA went on to explain that if an overly prescriptive approach is adopted, industry will be unable to innovate. It highlighted that while there is a place for prescription, an equal balance needs to be found:

how much prescription do you need, but make sure you don't kill innovation. But then you do need some certainty and not to be so fluffy that frankly you are not getting the outcomes that you want to see from an amenity or community point of view. So it is a tough one. But unfortunately, I think it is a bit of a mix, isn't it?²⁹

The Committee also notes industry opposition to prescriptive guidelines, such as those in NSW, as evidenced in the public hearings.³⁰ DELWP also explained to the Committee that it chose to adopt more of a performance-based, rather than prescriptive, approach in the development of BADS.³¹

The Committee, however, also notes the need for a balance between prescriptive and performance-based measures. A further discussion on this issue can be found in Section 2.3 of this report.

3.1.2 Adaptability to Victorian context

A number of stakeholders involved in the Inquiry cited NSW as a key jurisdiction which Victoria can learn from.³² Apartment design standards in NSW, particularly SEPP 65, have had a considerable influence on the regulation of apartment design in Victoria.³³ The OVGGA told the Committee that if SEPP 65 is to be considered the gold standard, Victoria's arrangements are silver.³⁴ At the public hearings, the OVGGA further outlined:

we should continue to aspire to even better apartment standards in Victoria compared to New South Wales because it is about the amenity long term for people who are living in these— they are referred to as a product, but really they are people's homes.³⁵

The Committee identified a number of areas in which Victoria can learn from NSW, ranging from dwelling-level to state-wide issues.

²⁹ Ms Rachel Dapiran, Executive Director, Infrastructure, Strategy and Planning, Victorian Planning Authority, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 14.

³⁰ See, for example, Mr Julian Lyngcoln, *Transcript of evidence*, p. 55.

³¹ Mr Julian Lyngcoln, *Transcript of evidence*, p. 55.

³² See, for example, City of Greater Dandenong, *Submission 10*, received 22 October 2021, p. 2; Office of the Victorian Government Architect, *Submission 16*, p. 1; Municipal Association of Victoria, *Submission 27*, received 29 October 2021, p. 9; Property Council of Australia, *Submission 28*, p. 7; Moreland City Council, *Submission 39*, received 30 October 2021, p. 11; Darebin City Council, *Submission 40*, pp. 12–13; Australian Housing and Urban Research Institute, *Submission 49*, received 31 October 2021, p. 12; Dr Tom Alves, *Submission 50*, p. 12; Strata Community Association, *Submission 52*, received 5 November 2021, p. 3; Australian Institute of Architects, *Submission 54*, received 12 November 2021, pp. 21–26; Dr Tom Alves, *Transcript of evidence*, pp. 3, 9–10; Dr Andrew Martel, Project HOME, Centre for Urban Research, School of Global, Urban and Social Studies, RMIT University, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, pp. 40–41; Mr Munir Vahanvati, City Designer, City Development, Darebin City Council, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, pp. 17–18; Ms Bronwen Hamilton, Design Manager and Principal Urban Designer, City of Melbourne, Public hearing, Melbourne, 15 November 2022, *Transcript of evidence*, pp. 13, 18; Ms Goksel Karpat, *Transcript of evidence*, p. 14; Ms Sarah Buckeridge, *Transcript of evidence*, p. 28; Mr David Islip, *Transcript of evidence*, p. 45; Mr Julian Lyngcoln, *Transcript of evidence*, p. 50.

³³ Dr Tom Alves, *Transcript of evidence*, p. 3.

³⁴ Mr David Islip, *Transcript of evidence*, p. 45.

³⁵ *Ibid.*

Dwelling-level

At the dwelling-level, one of the most important issues raised at the Inquiry was minimum apartment size. Unlike in Victoria, minimum apartment size is mandated in NSW. Throughout evidence received by the Committee, several stakeholders supported adopting this approach in Victoria,³⁶ while some industry groups argued against the suggestion.³⁷ Mandating minimum apartment sizes has also been somewhat of a controversial issue in NSW, with the NSW Land and Environment Court hearing a case, and consequently making a ruling in 2015, to specify that minimum apartment size mandates are enforceable.³⁸

The lack of size requirements for certain internal areas of apartments is a key element missing from BADS. The OVGA explained to the Committee that:

It is critical to understand that size delivers a baseline for amenity and the apartments to ensure that they actually are fit for purpose. Minimum sizes protect the public from the worst of the worst. While the standards address bedroom sizes and living areas, this has led to limited space for kitchens, bench space, dining areas and also laundries.³⁹

While Victoria currently uses minimum standards for bedrooms and living areas, there are no such standards for kitchen or dining areas. The OVGA highlighted NSW as a jurisdiction in which design is based around minimum apartment size.⁴⁰

The OVGA explained to the Committee that a 2015 DEWLP survey showed 76% of respondents agreed or strongly agreed there should be requirements around minimum apartment sizes, to ensure apartments have reasonably sized rooms and storage.⁴¹ A more detailed discussion around minimum apartment size can be found in Section 5.2 of this report.

Two further dwelling-level issues raised during the Inquiry were daylight and ventilation requirements.

Unlike in Victoria, minimum daylight standards are mandated in NSW. Specifically, NSW sets a two-hour minimum for daylight access as an acceptable outcome to meet the regulated daylight objective. Part 4 of the *Apartment Design Guide* sets out requirements for daylight access. Several stakeholders have supported adopting this approach in Victoria.⁴² Further discussion on daylight provisions can be found in Section 5.3 of this report.

³⁶ Municipal Association of Victoria, *Submission 27*, p. 9; Moreland City Council, *Submission 39*, p. 11.

³⁷ See, for example, Property Council of Australia, *Submission 28*, p. 4.

³⁸ See *Botany Bay City Council v Botany Development Pty Ltd (No 2)* [2015] NSWLEC 55.

³⁹ Mr David Islip, *Transcript of evidence*, p. 40.

⁴⁰ *Ibid.*, pp. 40, 43.

⁴¹ *Ibid.*, p. 40.

⁴² See, for example, Darebin City Council, *Submission 40*, p. 3.

While ventilation standards exist in Victoria, higher natural ventilation standards are set in NSW.⁴³ In NSW, at least 60% of dwellings are required to have cross ventilation,⁴⁴ compared to 40% in Victoria.⁴⁵ Part 4 of the *Apartment Design Guide* sets out requirements for natural and cross ventilation. Some stakeholders involved in the Inquiry argued that Victoria should adopt the NSW standard.⁴⁶ A more detailed discussion around ventilation standards can be found in Sections 5.8 and 6.8 of this report.

FINDING 8: Provisions around minimum apartment size, daylight, and ventilation have led to improved apartment design outcomes in New South Wales.

Building-level

At the building-level, the two issues that were most frequently brought to the Committee's attention were building separation and communal open space.

Unlike in Victoria, requirements for building separation are mandated in NSW. Part 3 of the *Apartment Design Guide* sets out requirements for building separation. At the local council roundtable, held as part of the Inquiry, the Committee was informed about the differences between building separation standards in NSW and other Australian jurisdictions. The Darebin City Council outlined that NSW, SA and WA all have minimum building separation standards which require minimum spaces between buildings.⁴⁷ The Darebin City Council told the Committee that building separation standards:

affects significantly the quality and the amenity of the apartments because it directly affects the natural light that you get into dwellings—the sunlight you get into the dwellings—and the privacy concerns around some of the dwellings, people overlooking each other. So having those minimum standards is quite important. All of those standards have been in place in other states, whereas in Victoria we do not have those minimum building separation standards.⁴⁸

The Committee highlights the importance of effective requirements around building separation. Standards around minimum building separation would improve the amenity of apartment developments and their liveability.

Provisions relating to communal space requirements in NSW were also raised during the Inquiry. The OVGAs suggested to the Committee that SEPP 65 better protects amenities in NSW than the Victorian framework, effectively setting the NSW benchmark higher

⁴³ Office of the Victorian Government Architect, *Submission 16*, p. 2.

⁴⁴ NSW Department of Planning and Environment, *Apartment design guide*, p. 85.

⁴⁵ Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, 2021, p. 126.

⁴⁶ See, for example, Office of the Victorian Government Architect, *Submission 16*, p. 2.

⁴⁷ Mr Munir Vahanvati, *Transcript of evidence*, pp. 17–18.

⁴⁸ *Ibid.*

than Victoria.⁴⁹ Furthermore, some stakeholders noted that NSW provides clearer definitions of communal open space in its standards, and suggested this approach be adopted in Victoria.⁵⁰ Specifically, the OVGAs explained that the ‘objective for communal outdoor space relies on an appropriate area having adequate amenity’.⁵¹ In NSW, this is defined as ‘communal open space has a minimum area equal to 25% of the site’.⁵² The Committee notes the importance of having a clear definition of communal space, as is the case in NSW, and broadly agrees with the sentiment that such an addition to the Victorian standards would be beneficial.

FINDING 9: A clear definition of communal space and standards around building separation would improve the amenity and liveability of new apartment developments.

Neighbourhood-level

At the neighbourhood-level, planning and the use of master plans was referenced by some stakeholders as an area in which Victoria could learn from NSW.

In its submission, the VPA listed NSW as a jurisdiction where guidance on apartment design ‘has extended to providing guidance on external relationships and the quality of public realm’.⁵³

The Committee notes that NSW does provide some guidance on adapting to local context and planning. For example, the *Parramatta Road Corridor Urban Transformation Planning and Design Guidelines* provide direction on built form typologies for different development setting, focussing on how building scale should be altered to reflect differing contexts.⁵⁴

Some stakeholders suggested that the use of master plans could be applied in the Victorian context.⁵⁵ The Committee broadly supports the further implementation of planning and master plans in any future iteration of BADS. A further discussion on master plans can be found in Section 7.2.

FINDING 10: The use of master plans in New South Wales has been beneficial in the planning context.

⁴⁹ Mr David Islip, *Transcript of evidence*, p. 42.

⁵⁰ See, for example, Office of the Victorian Government Architect, *Submission 16*, p. 2.

⁵¹ *Ibid.*

⁵² *Ibid.*

⁵³ Victorian Planning Authority, *Submission 15*, received 27 October 2021, p. 3.

⁵⁴ UrbanGrowth NSW, *Parramatta Road Corridor Urban Transformation: Planning and Design Guidelines: Implementation tool kit*, 2016.

⁵⁵ See, for example, Victorian Planning Authority, *Submission 15*.

State-wide

The Committee found that there are several state-wide policy areas in which Victoria could learn from current NSW guidelines. These areas include the use of design review panels and design verification, requirements for the use of architects, innovation, building defects and safety guidance.

Unlike in Victoria, NSW mandates design review panels and design verification. SEPP 65 contains provisions for the appointment of design review panels and outlines their functions, while Part 5 of the *Apartment Design Guide* provides a comprehensive overview of the requirements of the panels. The AIA told the Committee that design review panels act to enable high-quality apartments. It further recommended that they be implemented broadly through a state-wide framework to inform planning and review, citing NSW as a useful benchmark.⁵⁶

A design verification statement is a requirement for certain developments that have a significant impact on the neighbourhood. Design review panels review these statements against principles outlined in SEPP 65 and associated guides. Several stakeholders have suggested that this approach be taken in Victoria.⁵⁷

As mentioned in Section 8.1.2 of this report, the Committee believes design review panels should be incorporated into Victorian the apartment design standards framework. A further discussion around design review panels and design verification can be found in Sections 8.1.2 and 8.1.1 of this report.

Unlike in Victoria, NSW requires a registered architect to be engaged for complex projects and large developments. Under SEPP 65, a registered architect must verify the design quality principles have been addressed by the proposal or amended proposal. A design verification statement is also required for certain developments that have a significant impact in the neighbourhood, while complex projects must be designed by a registered architect.⁵⁸

In its submission, the AIA outlines that all Class 2 buildings in NSW (multiple storey apartments above 2 storeys) must be designed by an architect.⁵⁹ Furthermore, architects' performance in NSW is underpinned by disciplinary systems for non-compliance, and the *NSW Architects Code of Professional Conduct*.⁶⁰

Several stakeholders, including the City of Greater Dandenong, the OVGA and the City of Melbourne, argued this approach could be adapted to the Victorian context.⁶¹ The AIA recommended to the Committee that such a standard should be applied

⁵⁶ Ms Sarah Buckeridge, *Transcript of evidence*, p. 28.

⁵⁷ Australian Institute of Architects, *Submission 54*, p. 12; Dr Tom Alves, *Transcript of evidence*, p. 10; Ms Bronwen Hamilton, *Transcript of evidence*, p. 18.

⁵⁸ Mr David Islip, *Transcript of evidence*, p. 47.

⁵⁹ Australian Institute of Architects, *Submission 54*, p. 23.

⁶⁰ NSW Architects Registration Board, *NSW Architects Code of Professional Conduct*

⁶¹ City of Greater Dandenong, *Submission 10*, p. 2; Office of the Victorian Government Architect, *Submission 16*, p. 2; Ms Bronwen Hamilton, *Transcript of evidence*, p. 18.

Australia-wide.⁶² A joint statement created by the AIA, the Association of Consulting Architects Australia and the Association of Architecture Schools of Australasia, recommends that:

1. Architects are identified as being able to prepare design documentation, provide design, construction, and supervisory oversight, and provide relevant certifications, such as proposed design declarations, for all building types, categories, and levels of complexity; and
2. Building Designers are identified as providing a limited scope of work unless they can demonstrate equivalent qualifications and experience as a registered Architect.⁶³

While the Committee agrees in principle to the concepts highlighted in the joint statement, it notes that such an issue must be carefully considered by the relevant authorities, in Victoria's case DELWP. A further discussion on the use of registered architects can be found in Section 8.1.1 of this report.

FINDING 11: Unlike Victoria, New South Wales requires a registered architect to be engaged for complex projects and large developments, a provision supported by some stakeholders involved in the Inquiry.

3.2 Western Australia

A number of stakeholders cited WA as a jurisdiction that the Committee should consider within the scope of its Inquiry.⁶⁴ There was consensus that certain policy elements, particularly in regard to daylight, ventilation and building separation, are addressed effectively in WA's design framework.⁶⁵

In 2016, 4.7% of Australia's occupied apartments were located in WA, while 6.1% of the state's residents lived in apartments.⁶⁶

The Committee notes that primarily WA adopts a performance-based approach to apartment design standards, with some prescriptive elements.

3.2.1 Governance and regulation of apartment design standards

The governance and regulation of apartment design is overseen by the WA Department of Planning, Lands and Heritage (DPLH). Since 2019, apartment design has been regulated under the state's *Residential Design Codes Volume 2 – Apartments*

⁶² Australian Institute of Architects, *Submission 54*, p. 23.

⁶³ Australian Institute of Architects, *Submission 54, attachment 1*, received 12 November 2021, p. 4.

⁶⁴ See, for example, Office of the Victorian Government Architect, *Submission 16*, p. 2; Mr Munir Vahanvati, *Transcript of evidence*, p. 15.

⁶⁵ See, for example, Office of the Victorian Government Architect, *Submission 16*, p. 2; Mr Munir Vahanvati, *Transcript of evidence*, pp. 15, 17.

⁶⁶ Australian Bureau of Statistics, *Apartment living*.

(Apartment Design Policy).⁶⁷ Apartments within Perth are also regulated by the *City of Perth Planning Scheme No 2 – Planning policy manual – Development and Design Policy Section 4.1*. WA’s *State Planning Policy 7.0 Design of the Built Environment (SPP 7.0)* establishes 10 design principles that underpin the policy objectives and the element objectives in the apartment design policy.⁶⁸

Residential Design Codes Volume 2 – Apartments (Apartment Design Policy)

The Apartment Design Policy is produced by DPLH. The document is aimed at providing a comprehensive basis for the control of residential development in WA and provides planning and design standards for residential apartments. It provides objectives, design principles and ‘deemed to comply’ requirements addressing a range of issues. The policy also sets out measurable outcomes under the ‘deemed to comply’ requirements for other design features, such as a minimum dwelling size. The policy aims to:

- guide stakeholders involved in the apartment design process, including developers, planners, architects and other professionals
- assist planning professionals with strategic planning and in the preparation of local controls, design guidelines and other requirements
- inform the community on good design and planning principles around the development of residential apartments.⁶⁹

The DPLH highlights that the Apartment Design Policy was influenced by content from the NSW *Apartment Design Guide*, calling it ‘a well-established and tested exemplar of contemporary planning and design policy for apartment development’.⁷⁰

Notably, WA’s policy is performance-based. The Apartment Design Policy outlines that all applications for development approval are required to demonstrate that the design achieves the objectives of each design element. It further specifies that:

While addressing the Acceptable Outcomes is likely to achieve the Objectives, they are not a deemed-to-comply pathway and the proposal will be assessed in context of the entire design solution to ensure the Objectives are achieved. Proposals may also satisfy the Objectives via alternative means or solutions.⁷¹

The Committee notes, however, that there are prescriptive elements in the policy, as it also provides specific and measurable standards on apartment design, an element which Victoria could learn from.

⁶⁷ Western Australia Planning Commission and Western Australia Department of Planning, Lands and Heritage, *State Planning Policy 7.3 Residential Design Codes Volume 2 - Apartments*, 2019.

⁶⁸ Western Australia Planning Commission and Western Australia Department of Planning, Lands and Heritage, *State Planning Policy 7.0 Design of the Built Environment*, 2019, p. 6.

⁶⁹ Western Australia Planning Commission and Western Australia Department of Planning, Lands and Heritage, *State Planning Policy 7.3 Residential Design Codes Volume 2 - Apartments*, p. ii.

⁷⁰ *Ibid.*, p. i.

⁷¹ *Ibid.*, p. iv.

City of Perth Planning Scheme No 2 and State Planning Policy 7.0

The *City of Perth Planning Scheme No 2 – Planning policy manual – Development and Design Policy Section 4.1* and WA’s *State Planning Policy 7.0 Design of the Built Environment* (SPP 7.0) also play a role in the governance and regulation of apartment design standards.

Perth’s planning scheme aims to enhance the quality and character of Perth’s built environment through effective and innovative design and provide a high level of amenity in the built environment. The scheme also sets out a number of key principles and guidelines around developments.⁷² These principles cover areas such as built form, development interface and interaction, access, traffic and movement, safety and security and the environment.⁷³

SPP 7.0 aims to address design quality and built form outcomes in the state. The policy looks to deliver economic, social, environmental and cultural benefits through good design outcomes.⁷⁴ It does this through setting out the ‘objectives, measures, principles and processes which apply to the design and assessment of built environment proposals through the planning system’.⁷⁵ As such, the policy provides a key framework for a range of planning policies that outline design guidance for planning and development proposals.

The Committee notes that both policies complement the Apartment Design Policy and deliver a comprehensive set of regulatory instruments to guide and mandate quality apartment design standards in WA. This was reflected by several stakeholders and provides an opportunity for Victoria to learn from policies and provisions in WA.⁷⁶

FINDING 12: Western Australia uses a number of complementing policies to regulate apartment design standards.

3.2.2 Adaptability to Victorian context

The Committee considered a range of apartment design standards in WA and found examples that could be implemented in Victoria. The policy areas assessed to have relevance to Victoria include daylight, natural ventilation and building separation.

⁷² City of Perth, *City Planning Scheme No.2: Planning Policy Manual – Section 4.1 City Development Design Guidelines*, 2017, pp. 3–17.

⁷³ Ibid.

⁷⁴ Western Australia Planning Commission and Western Australia Department of Planning, Lands and Heritage, *State Planning Policy 7.0 Design of the Built Environment*, p. 3.

⁷⁵ Ibid.

⁷⁶ See, for example, Office of the Victorian Government Architect, *Submission 16*, p. 2; Mr Munir Vahanvati, *Transcript of evidence*, p. 15.

Dwelling-level

Unlike Victoria, WA sets minimum standards for daylight within dwellings. Similar to NSW, the standards set a two-hour minimum for daylight access as an acceptable outcome to meet the daylight objective. As a further prescriptive measure, WA also regulates the acceptable sources of daylight. In particular, WA prohibits the use of lightwells as primary sources of daylight.⁷⁷ Some stakeholders argued that Victoria should also set a specific daylight standard and regulate sources of daylight.⁷⁸

The Committee broadly agrees with the WA requirements around daylight access, in line with NSW regulations.

FINDING 13: Both New South Wales and Western Australia mandate minimum daylight access in residential apartments.

Building-level

At the building-level, natural ventilation and building separation are two elements of WA's policy which represent good practice and are applicable in Victoria.

The Committee found that WA sets higher standards for natural ventilation than Victoria. WA's standards around natural ventilation broadly align with those in NSW. The state also requires that natural ventilation takes into consideration the location and site context of the apartment building, along with solar access.⁷⁹ Some stakeholders pointed to WA as an example of effective regulation around natural ventilation.⁸⁰

FINDING 14: Natural ventilation requirements in Western Australia provide for higher ventilation standards than those in Victoria.

Unlike Victoria, WA sets minimum standards for building separation. The Apartment Design Policy sets out several objectives and acceptable outcomes around building separation. For example, the policy requires new developments to support the desired future streetscape character with spaces between buildings, and ensure buildings have sufficient separation to assure residential amenity, including privacy and daylight access.⁸¹ Some stakeholders argued that Victoria should follow this example.⁸²

⁷⁷ See section A 4.1.3 of the Western Australia Planning Commission and Western Australia Department of Planning, Lands and Heritage, *State Planning Policy 7.3 Residential Design Codes Volume 2 - Apartments*, p. 61.

⁷⁸ Darebin City Council, *Submission 40*, p. 5; Mr Munir Vahanvati, *Transcript of evidence*, pp. 17–18.

⁷⁹ Western Australia Planning Commission and Western Australia Department of Planning, Lands and Heritage, *State Planning Policy 7.3 Residential Design Codes Volume 2 - Apartments*, p. 64.

⁸⁰ See Office of the Victorian Government Architect, *Submission 16*, p. 2.

⁸¹ Western Australia Planning Commission and Western Australia Department of Planning, Lands and Heritage, *State Planning Policy 7.3 Residential Design Codes Volume 2 - Apartments*, p. 27.

⁸² Mr Munir Vahanvati, *Transcript of evidence*, pp. 17–18.

FINDING 15: Unlike in Victoria, minimum standards for building separation in Western Australia are regulated.

3.3 South Australia

The SA Government's *Good design for great neighbourhoods and places* highlights that a growing population, increased demand for housing choice, and an expanding urban footprint have led to a substantial increase in recent apartment developments.⁸³ Adelaide, which has historically been dominated by detached housing, is undergoing a transition in which multi-level apartment buildings are expanding.⁸⁴ The *30 Year Plan for Greater Adelaide* has also led to the development of new forms of apartment housing in recognition of population pressures leading to an increase in residential density.⁸⁵

In 2016, 3.8% of Australia's occupied apartments were located in SA, while 6.8% of residents in the state lived in apartments.⁸⁶

SA adopts a broadly performance-based approach to standards. There are, however, certain standards that are prescribed.

3.3.1 Governance and regulation of apartment design standards

SA adopts a mostly performance-based approach, with some prescriptive elements, in its governance and regulation of apartment design standards. Given this, apartment design standards often rely on guidance rather than requirements. The two main policies responsible in guiding the state's design framework are the *Design Guidelines for Sustainable Housing and Liveable Neighbourhoods* (Design Guidelines) and the *Principles of Good Design*.

The Design Guidelines set out guidance on apartment design standards in SA.⁸⁷ The guiding principles of the Design Guidelines highlight that apartment housing should be designed to 'meet the needs of a diverse range of households, incorporating a mix of dwelling unit sizes and tenures'.⁸⁸

The Design Guidelines are supplemented by the *Principles of Good Design*, which set out six principles that guide approaches to housing design, more generally. The principles consist of context, inclusive, durable, value, performance, and sustainable.⁸⁹

⁸³ Office for Design and Architecture SA, *Good design for great neighbourhoods and places*, 2019, pp. 2–3.

⁸⁴ *Ibid.*, p. 2.

⁸⁵ SA Housing Authority, *Form of housing: 1.3 Apartment design: Design guidelines for sustainable housing & liveable neighbourhoods*, 2020, p. 5.

⁸⁶ Australian Bureau of Statistics, *Apartment living*.

⁸⁷ SA Housing Authority, *Form of housing: 1.3 Apartment design*.

⁸⁸ *Ibid.*, p. 8.

⁸⁹ Office for Design and Architecture SA, *Principles of good design*, 2019.

The principles are not used as a prescriptive tool nor are they legislated, rather they act as a practical framework and reference point to support design outcomes.⁹⁰

3.3.2 Adaptability to Victorian context

The Committee identified various policy areas in which Victoria could learn from SA. These are primarily based around universal design, daylight, planning and the use of design review panels.

Dwelling-level

In terms of universal design, SA provides specific guidance on apartment living for ageing populations in *Housing for Life: Designed for Living*.⁹¹ The policy sets out several overarching principles aimed to be embedded in any future planning around housing and precinct design for older residents.⁹²

Several policies around population ageing and ageing-well are discussed in the Design Guidelines. Elements older residents find important in apartment design are presented, along with a range of industry perspectives. The Design Guidelines also detail economic arguments for considering the housing needs of older residents. Specifically, they provide that universal dwelling designs should 'enable residents to age in place; and enable housing designs to be integrated with and responsive to adjoining land uses and amenity'.⁹³

While the Committee commends the work around accessibility featured in BADS, particularly around technical elements, it notes there are opportunities for further improvement. This is particularly evident in comparison with the accessibility policy present in SA.

A further discussion on accessibility can be found in Section 5.1 of this report.

FINDING 16: South Australia's *Housing for Life: Designed for Living* policy effectively highlights several principles to be embedded in any future planning around housing precinct design for older residents.

The Committee also heard evidence that SA has specific guidance around daylight in apartments. Notably, SA standards include guidance for the minimum and maximum dimensions of lightwells, a guideline that is not present in other Australian jurisdictions.⁹⁴ The Design Guidelines further highlight that open space is crucial for

⁹⁰ Office for Design and Architecture SA, *Good design for great neighbourhoods and places*, p. 6.

⁹¹ Office for Ageing Well South Australia, *Housing for life: Designed for living*, 2019.

⁹² *Ibid.*, p. 4.

⁹³ SA Housing Authority, *Form of housing: 1.3 Apartment design*, p. 8.

⁹⁴ Darebin City Council, *Submission 40*, p. 15.

ensuring access to natural light.⁹⁵ Some stakeholders have pointed to SA as a good practice example in relation to daylight standards.⁹⁶

FINDING 17: South Australia employs a unique approach in guidance around daylight access, with guidance for the minimum and maximum dimensions of lightwells included in the standards.

State-wide

Design review panels have operated in SA since 2011. They operate at a state-level for larger-scale developments, with proposals assessed by the State Commission Assessment Panel and referred to the South Australian Government Architect. In mid-2021, the Local Design Review Scheme came into effect in SA, which provides local councils with a consistent state-wide approach to design review. Design review in SA is guided by the *Principles of Good Design* and aims to identify opportunities to encourage high-quality design.⁹⁷

FINDING 18: South Australia has a design review framework with a separate Local Design Review Scheme which provides local councils a consistent state-wide approach to design review.

A more detailed discussion around design review panels can be found in Section 8.1.2 of this report.

⁹⁵ Renewal SA, *Sustainable housing principles: 2.2 Design guidelines for site layouts*, p. 28.

⁹⁶ Mr Munir Vahanvati, *Transcript of evidence*, p. 17.

⁹⁷ Office for Design and Architecture SA, *Design Review*, <<https://www.odasa.sa.gov.au/design-review>> accessed 6 June 2022.

4 International jurisdictions

This chapter examines the governance and regulation of apartment design standards in three international jurisdictions. The Committee chose to examine London, Toronto and Auckland, as they were commonly identified in evidence throughout the Inquiry. In assessing the relevant arrangements in these jurisdictions, the chapter also examines their adaptability to the Victorian context.

4.1 London

In 2020, London's estimated population rose to just over 9 million people, making it the largest city in the United Kingdom and one of the largest in the world.¹ Housing demand outstrips supply in London due to rapid population and economic growth:

Over the long term, growth in London's housing stock has not kept pace with population or housing growth: for example, since 1997 the number of people in London has grown by 28% and the number of jobs in London by 45%, but the number of homes has grown by only 20%.²

Apartments make up the majority of new homes in London, for example, an average of only 1,000 new houses were sold each year over the ten years to 2019, against approximately 10,000 new apartments in those years.³ Usually provided through leasehold, London has approximately 1.25 million leasehold dwellings, and the vast majority are apartments (1.20 million).⁴ Tall buildings (defined as more than 20 storeys) are also a key feature of the London property landscape, even when accounting for a drop from the peak of application permissions in 2014 and 2016. Tall buildings in London are mostly residential in nature, with a total of 91,578 homes currently in the tall buildings pipeline.⁵

London presents similar trends to Melbourne in increased apartment living and concentration in high-rise apartment buildings within the central area. To manage the need for adequate housing stock for its ever-growing population, the Greater London Authority (GLA) undertakes a number of planning policy activities which provide useful lessons for Victoria in considering apartment and dwelling design. The approaches adopted in London were supported by some stakeholders as described below.⁶

1 Greater London Authority, *Housing in London 2021: The evidence base for the London Housing Strategy*, 2021, p. 7.

2 Ibid.

3 Greater London Authority, *Housing in London: 2019: The evidence base for the Mayor's Housing Strategy*, 2019, p. 50.

4 Greater London Authority, *Housing in London 2021*, p. 19.

5 Ibid., p. 32.

6 See for example, Project HOME, *Submission 43*, received 31 October 2021, p. 6; Australian Housing and Urban Research Institute, *Submission 49*, received 31 October 2021, p. 13; Darebin City Council, *Submission 40*, received 31 October 2021, pp. 16-17.

4.1.1 Governance and regulation of apartment design standards

The governance and regulation of apartment design standards in London is split between national policies and city-based policies. At the national level, several policies highlight good design practices and provide design guidance around quality measures. At the city level, governance and regulation is primarily found in the *London Plans* and *London Housing Supplementary Planning Guidance* (LHSPG). Both policies provide a broader strategic framework for apartment design standards in the city.

National policies

At the national level across England, the *National Planning Policy Framework* is published by the Ministry of Housing, Communities and Local Government to set the Government's planning policy.⁷ Under the framework, the *National Design Guide* (alongside the *National Model Design Code* and *Guidance Notes for Design Codes*) illustrates good design in the planning system according to ten characteristics for well-designed places. The *National Design Guide* notes that while buildings are an important part of the development management system, good design also accounts for other components including the context for places and buildings; the landscape; technical infrastructure such as transport and utilities; and social infrastructure such as social, leisure and commercial uses and activities.⁸

Building for a Healthy Life (BHL) is also a design guidance toolkit issued by Homes England, National Health Service (NHS) England and NHS Improvement to outline design quality measures. It is described as England's most widely known and used design tool for new and growing neighbourhoods, characterised by 12 underlying principles for the design and placemaking of new developments falling under three themes of integrated neighbourhoods, distinctive places and streets for all.⁹

London Plan

Within London specifically, a series of *London Plans*, prepared by the Mayor and the GLA, form the statutory spatial development plan for the Greater London area. It sets out the overall strategic framework for London's development over the next 20–25 years and provides guidance to the 32 London boroughs to coordinate growth. The most recent *London Plan* was issued in 2021 and is the third plan since establishment in 2004.¹⁰ Its areas of focus include housing, social infrastructure, the economy, and heritage and culture. Importantly for this Inquiry, it also includes a design component integrating housing quality and standards. Policy D6 on housing quality and standards includes various finite minimum standards, particularly minimum space

7 UK Ministry of Housing, Communities & Local Government, *National Planning Policy Framework*, 2021, <<https://www.gov.uk/government/publications/national-planning-policy-framework--2>> accessed 3 June 2022.

8 UK Ministry of Housing, Communities & Local Government, *National Design Guide: Planning practice guidance for beautiful, enduring and successful places*, 2021, p. 5.

9 David Birkbeck, et al., *Building for a healthy life: A design toolkit for neighbourhoods, streets, homes, and public spaces*, report for Design for Homes, 2020, pp. 2–3.

10 Greater London Authority, *The London Plan: The spatial development strategy for Greater London*, 2021, pp. 2–5.

standards for dwellings of different sizes, taking into account minimum gross internal area (GIA) relative to the number of occupants in the dwelling. It also includes minimum ceiling heights based on GIA and articulates that single aspect dwellings should normally be avoided.¹¹

The standards also describe various qualitative measures for residential development design including layout and orientation of the scheme, communal outside amenity spaces, and useability and ongoing maintenance.¹²

London Housing Supplementary Planning Guidance

The LHSPG document was issued under the *London Plan 2016* and currently continues to be in force. It deals with a range of strategic policies including the neighbourhood scale, housing supply, quality of dwellings, the design process, and mixed use and large developments.¹³

The LHSPG sets out an approach for the design of individual dwellings and shared spaces within buildings, with standards on entrance and approach, active frontages, access, shared circulation, car parking, cycle storage, refuse and recycling facilities, minimum space standards, private open space, home as a retreat, privacy, dual aspect, floor to ceiling heights, daylight and sunlight, and various climate change mitigation and adaptation standards.¹⁴

With the recent publication of the updated *London Plan 2021*, there is currently a consultation to produce a single guidance document to implement housing quality and standards for all housing tenures, taking into account Policy D6 in the *London Plan* as well as the LHSPG.¹⁵

Mixed performance-based and prescriptive approach

The approach taken in London is a mix of mostly performance-based standards, with some prescriptive rules on issues such as minimum internal space for dwellings. The *London Plan 2021* particularly notes minimum space standards are required as '[e]nsuring homes are of adequate size and fit for purpose is crucial in an increasingly dense city'.¹⁶ On the other hand, qualitative measures are premised in more performance-based language, for example, in relation to private outside space, the *London Plan* notes that the space 'should be practical in terms of its shape and utility, and care should be taken to ensure the space offers good amenity'.¹⁷

¹¹ Ibid., pp. 128–129.

¹² Ibid., pp. 130–131.

¹³ Greater London Authority, *Housing supplementary planning guidance: London Plan 2016 implementation framework*, 2016.

¹⁴ Ibid., pp. 75–95.

¹⁵ Greater London Authority, *Housing Design Standards LPG*, 2022, <<https://www.london.gov.uk/what-we-do/planning/implementing-london-plan/london-plan-guidance/housing-design-standards-lpg>> accessed 3 June 2022.

¹⁶ Greater London Authority, *The London Plan*, p. 128.

¹⁷ Ibid., p. 129.

The LHSPG employs a similar approach by outlining prescriptive requirements in some areas alongside more flexible standards in others. Minimum requirements are found in aspects such as accessible and adaptable dwellings, car parking, dwelling space and floor to ceiling heights.¹⁸ More flexibility is in place for standards such as privacy, which states that proposals should demonstrate how habitable rooms have an adequate level of privacy from neighbouring properties, the street and public spaces.¹⁹

Project HOME specified the London approach as an example where the use of prescriptive design rules has not stifled or reduced design innovation:

further afield you could go to London and say, 'Well, I can see plenty of innovative design but just not so many triangular-shaped rooms where you can't fit a bed in', where you meet the floor area requirements but you do not meet, frankly, the functionality requirements. That is what we want to avoid basically.²⁰

The Committee notes that London is a jurisdiction in which a mix of both prescriptive and performance-based approaches was viewed favourably as having improved housing quality while also allowing for design innovation.

4.1.2 Adaptability to Victorian context

In assessing the adaptability of apartment design standards in London to Victoria, the Committee focussed on affordable housing, planning and the local context, accessibility, communal open space, and aspect, daylight and sunlight.

Planning and the local context

From a strategic policy perspective, the detailed planning policies in place, first through broad-based countrywide design policy documents such as the *National Design Guide*, through to finite details of individual dwellings contained in the *London Plan* and LHSPG, demonstrate a comprehensive approach to planning that considers local context and all relevant tiers of planning. The *London Plan* in particular incorporates housing planning policy into the overall development of the city, placing dwelling design and standards in the context of considerations such as the economy and social infrastructure. These are positive planning strategies that situate individual buildings and developments within their local and wider urban context.

A discussion of master planning is explored further in Section 7.2 of this report, particularly to highlight the potential for more concerted effort to improve the development and use of master planning in Victoria.

FINDING 19: London has implemented a planning framework for the consideration of dwellings situated in their neighbourhoods and local areas.

¹⁸ Greater London Authority, *Housing supplementary planning guidance*, pp. 76–87.

¹⁹ Ibid., p. 85.

²⁰ Professor Ralph Horne, Project HOME, Centre for Urban Research, School of Global, Urban and Social Studies, RMIT University, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 43.

Accessibility

Requirements outlining minimum accessibility are in place under the *London Plan* and the LHSPG. The *London Plan* specifically notes that these requirements exist '[t]o provide suitable housing and genuine choice for London's diverse population, including disabled people, older people and families with young children'.²¹ Accessibility provisions of the London approach were considered by the Australian Housing and Urban Research Institute to be successful, noting higher rates of accessible housing in London than in other areas of England:

the Local Area Plan for London (London Plan) has successfully required 90 per cent of all new housing be accessible or adaptable and 10 per cent to be wheelchair user dwellings. The Greater London area has the highest level of mandatory accessibility standards in England and the London Plan has been considered successful in bolstering the number of accessible houses in the Great London region. Areas with lower mandatory accessibility standards for newly built accommodation also have lower rates of accessible housing, suggesting that voluntary standards and guidance have not been effective in increasing the availability of accessible housing.²²

The overall *London Plan* approach for growth through 'building strong and inclusive communities' particularly mentions that those involved in planning and development must support the diversity of Londoners. It states that the aim is to create a city where all Londoners 'can move around with ease and enjoy the opportunities the city provides, creating a welcoming environment that everyone can use confidently, independently, and with choice and dignity' without segregation.²³

Accessibility of apartment dwellings in Victoria is considered in Section 5.1. The London approach demonstrates that it is possible to adopt mandatory standards to improve accessibility for all groups of people, noting a similar diversity of various groups reside in Melbourne.

FINDING 20: London effectively utilises mandatory requirements for the adoption of accessible standards for new dwellings to accommodate the needs of its diverse population including people with disabilities, older people and families with young children.

Aspect, daylight and sunlight

The use of single aspect dwellings is discouraged through the *London Plan* which states that because single aspect dwellings are more difficult to ventilate and more likely to overheat, they 'should normally be avoided':

Single aspect dwellings that are north facing, contain three or more bedrooms or are exposed to noise levels above which significant adverse effects on health and quality of life occur, should be avoided. The design of single aspect dwellings must demonstrate

²¹ Greater London Authority, *The London Plan*, p. 132.

²² Australian Housing and Urban Research Institute, *Submission 49*, p. 13.

²³ Greater London Authority, *The London Plan*, p. 14.

that all habitable rooms and the kitchen are provided with adequate passive ventilation, privacy and daylight, and that the orientation enhances amenity, including views. It must also demonstrate how they will avoid overheating without reliance on energy intensive mechanical cooling systems.²⁴

The LHSPG goes into further detail on circumstances where single aspect dwellings may be acceptable.²⁵ It starts from a clearly stated position that single aspect dwellings are not preferred but articulates some circumstances where they can be allowed if certain conditions are met.

‘Daylight and sunlight’ is covered in the LHSPG under Standard 32 which states that ‘[a]ll homes should provide for direct sunlight to enter at least one habitable room for part of the day’, with it being preferable for living areas and kitchen dining spaces to receive direct sunlight.²⁶ The *London Plan* emphasises that sufficient daylight and sunlight should be incorporated into the design of development to avoid overheating, minimise overshadowing and maximise outside amenity space.²⁷

The recent consultation draft of *Housing Design Standards*, released in February 2022, contains a proposal to bring these components together under the one banner of ‘Aspect, orientation, daylight and sunlight’,²⁸ however, the approved guidance is only expected to be published later in 2022.²⁹

Darebin City Council noted various consultation formulations of the London standards for aspect, daylight and sunlight as providing stronger guidance on acceptable design.³⁰ The Committee agrees that London’s approach is informative to designers regarding the need to avoid single aspect dwellings, and to maximise access to sunlight and daylight.

FINDING 21: London’s approach provides detail on issues relating to aspect, daylight and sunlight in its standards, which can be of benefit in the design of developments and dwellings.

Communal open space

Guidance is in place for the development of well-designed communal open space throughout London. Given London’s holistic approach to planning that considers all aspects of neighbourhood integration, the standards encompass adequate communal open space for people of all ages. To this end, the LHSPG contains requirements for new housing to contribute to the neighbourhood scale, including a recognition of the

²⁴ Ibid., p. 129.

²⁵ Greater London Authority, *Housing supplementary planning guidance*, pp. 85–86.

²⁶ Ibid., p. 87.

²⁷ Greater London Authority, *The London Plan*, p. 125.

²⁸ Greater London Authority, *Housing Design Standards: Consultation draft February 2022*, 2022, p. 23.

²⁹ Greater London Authority, *Housing Design Standards LPG*.

³⁰ Darebin City Council, *Submission 40*, p. 16.

need for ‘communal and open spaces and the particular need to take account of the requirements of children, older and disabled people’.³¹ It also contains a requirement for developments to make appropriate play provision in accordance with Mayoral guidance where there is estimated occupancy of ten or more children.³²

Similarly, the *London Plan* states that communal outside amenity spaces should:

- meet the requirements of the number of residents
- be easily accessible from dwellings
- be able to be appreciated from the inside
- be overlooking
- support a balance of informal social activity and play opportunities
- meet the changing and diverse needs of occupiers.³³

Communal play space must also meet particular standards, including the preparation of needs assessments in certain circumstances, and the incorporation of at least 10 square metres of play space per child to ensure good-quality and accessible spaces.³⁴

Such provisions, noted by the Darebin City Council in its submission,³⁵ demonstrate a keen focus on how residential developments contribute to the life of a neighbourhood and local context. The Committee also notes that these provisions demonstrate how design standards can be used to ensure that individuals are enabled to meaningfully access and enjoy communal space.

FINDING 22: London encourages good design to enable community enjoyment and increased amenity of communal open spaces, including considering play provisions for children and accessibility of spaces for all residents.

4.2 Toronto

Several stakeholders involved in the Inquiry cited Toronto as an important jurisdiction for further investigation by the Committee.³⁶ Toronto shares a number of characteristics with Melbourne and is experiencing similar urban consolidation transitions.

³¹ Greater London Authority, *Housing supplementary planning guidance*, p. 68.

³² *Ibid.*, p. 71.

³³ Greater London Authority, *The London Plan*, p. 131.

³⁴ *Ibid.*, p. 227.

³⁵ Darebin City Council, *Submission 40*, p. 17.

³⁶ See, for example, Victorian Planning Authority, *Submission 15*, received 27 October 2021, p. 3; Ignite, *Submission 47*, received 31 October 2021, p. 3; Ms Arianna Garay, Research Member, Ignite, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 20.

Toronto recorded a metropolitan population of nearly 2.8 million in 2021, while the Greater Toronto Area had a total population of 6.2 million in the same period.³⁷ The city has for years experienced a housing boom. Between 2006 and 2016, over 143,000 new dwelling units were constructed, 80% of which were housed in buildings with five or more storeys.³⁸ The demographics of residents in apartments is changing significantly, with 15,000 more families with children living in high-rise buildings in 2016 than in 1996.³⁹

4.2.1 Governance and regulation of apartment design standards

The governance and regulation of apartment design standards in Toronto is based on several key guiding policies. These policies employ a primarily performance-based approach and use guidance rather than prescription.

The primary set of guidelines assessed by the Committee are the *Growing Up: Planning for Children in New Vertical Communities Urban Design Guidelines*. These were often cited as part of the Inquiry to highlight areas where Victoria can improve its approach to apartment design standards. Other standards and performance measures, not discussed as part of this jurisdictional comparison, are also utilised in Toronto. These include the *Toronto Green Standard*,⁴⁰ *Mid-Rise Building Performance Standards*⁴¹ and the *Tall Building Design Guidelines*.⁴²

As part of its Inquiry, the Committee primarily focused on the governance and regulation arrangements in Toronto through a universal design and planning lens.

Growing Up: Planning for Children in New Vertical Communities

The *Growing Up: Planning for Children in New Vertical Communities Urban Design Guidelines* are a set of citywide guidelines aimed at integrating family-friendly design elements into new multi-unit residential developments.⁴³ The guidelines are structured into three parts: the unit, the building, and the neighbourhood. Each part of the guidelines is accompanied by specific objectives:

- The unit—aims to deliver functional spaces that accommodate the needs of a family, layouts that achieve sufficient room for families, comfortable bedrooms for multiple children and flexibility for ageing-in-place.
- The building—seeks to support the social life of residents in the building by increasing the number of larger units, thus encouraging the design and use of functional flexible amenities to support socialising in common spaces.

³⁷ Statistics Canada, *Population and dwelling counts: Census metropolitan areas, census agglomerations and census subdivisions (municipalities)*, 2022, <<https://www150.statcan.gc.ca/t1/tbl/en/tv.action?pid=9810000301>> accessed 3 June 2022.

³⁸ City of Toronto, *Growing up: Planning for children in new vertical communities: Urban design guidelines*, 2020, p. 5.

³⁹ Ibid.

⁴⁰ City of Toronto, *Toronto Green Standard version 2.0: New mid to high-rise residential and all non-residential development*.

⁴¹ City of Toronto, *Section 3: Performance standards for mid-rise buildings*.

⁴² City of Toronto, *Tall building design guidelines*, 2013.

⁴³ City of Toronto, *Growing up: Planning for children in new vertical communities*, p. 5.

- The neighbourhood—focusses on the experience of children in the city, including promoting independent mobility, access to green spaces, schools and community facilities, along with civic engagement.⁴⁴

At the public hearings, the Victorian Planning Authority (VPA) highlighted the benefit of these guidelines, noting their effectiveness:

I thought I would talk about the neighbourhood guidelines; remember, I talked about those three levels. They focus on the experience around the building, its siting and access to parks and the civic engagement for social interaction and inclusion, so what you do at that level. Then the second tier is what you do with building guidelines, so how you support what they call the social life of the building—how you make some large units, how you encourage functional and flexible places that people can spend time in and how you promote designs that change over time. And then the third tier in their guidelines is the unit, so those individual functional spaces—things around privacy and sunlight, and also how you allow for flexibility for ageing in place within an apartment setting. So we think they are a really great set of design standards to have a look at.⁴⁵

Notably, the guidelines are also supported and work in tandem with the:

- Provincial Policy Statement—which provides policy direction on provincial level land use and development.
- A Place to Grow (Growth Plan for the Greater Golden Horseshoe)—a framework for implementing the Government’s policies around strong communities and growth.
- City of Toronto Official Plan—which provides a planning framework for the future of Toronto.⁴⁶

Overall, the *Growing Up: Planning for Children in New Vertical Communities Urban Design Guidelines*, in association with the abovementioned policies, offer an effective framework for the implementation of family-friendly apartment design standards.

Townhouse and Low-Rise Apartment Guidelines

The City of Toronto’s *Townhouse and Low-Rise Apartment Guidelines* provide a further layer of policy provisions regarding apartment design standards. These guidelines are intended to complement other relevant city, state and federal policies and apply to the design, review and approval of new low-rise and multi-unit building developments.⁴⁷ There are several key considerations addressed in the guidelines, including quality of life and liveability, design excellence, sustainable design, heritage conservation and

⁴⁴ Ibid.

⁴⁵ Ms Rachel Dapiran, Executive Director, Infrastructure, Strategy and Planning, Victorian Planning Authority, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 13.

⁴⁶ City of Toronto, *Toronto Green Standard version 2.0*, p. 8.

⁴⁷ City of Toronto, *Townhouse and low-rise apartment guidelines*, 2018, p. 9.

public safety.⁴⁸ They also provide specific and measurable directions related to the following guiding principles:

1. Enhance the quality of the public realm and promote harmonious fit and compatibility with the existing and planned context through appropriate scale, placement, and setbacks of buildings.
2. Improve connectivity to streets, parks and open spaces, community services and amenities.
3. Reinforce the structure and image of the City and respond appropriately to prominent sites and important views.
4. Integrate and enhance natural and man-made features such as trees, topography and open spaces, and conserve heritage properties.
5. Create a safe, comfortable, accessible, vibrant, and attractive public realm and pedestrian environment.
6. Promote architectural, landscape and urban design excellence, sustainability, innovation, longevity, and creative expression with visionary design, high-quality materials and leading edge construction methods.
7. Create comfortable living conditions by providing access to sunlight, privacy, natural ventilation and open space.
8. Minimize the impact of service areas and elements on the public realm.
9. Consider and respond appropriately to opportunities and constraints on a specific site to meet the overall intent of the Guidelines.⁴⁹

The Committee notes that these guidelines can form a useful addition to the *Growing Up: Planning for Children in New Vertical Communities Urban Design Guidelines*, specifically in their focus on low-rise, multi-unit developments.

4.2.2 Adaptability to Victorian context

Issues raised in evidence to the Committee around the adaptability of standards in Toronto to Victoria were mainly based around universal design and planning. Toronto, like Melbourne, is experiencing similar urban consolidation transitions and offers valuable lessons for Victoria.

Universal design

It has been suggested that Toronto's approach to family-friendly design guidance is widely considered international best practice.⁵⁰ The primary policy document around universal design, *Growing Up: Planning for Children in New Vertical Communities Urban*

⁴⁸ Ibid., pp. 9–10.

⁴⁹ Ibid., pp. 10–11.

⁵⁰ Richard Tucker, et al., 'Architects' professional perspectives on child- and family-friendly apartment design in Australia', *Journal of Asian Architecture and Building Engineering*, 2021, p. 3.

Design Guidelines, acknowledges the shift to medium and high-density urban living and aims to ensure apartment living is viable for families.

The VPA suggested these guidelines separate universal design guidance into the unit, building and neighbourhood levels.⁵¹ Provisions at the unit level outline how living areas can foster a family-friendly environment. For example, they specify that units should provide sufficient space to comfortably enter and exit apartments, and space for storage. They also address issues around the size of kitchen and dining areas, living rooms and bedrooms, along with balcony and terrace guidance to extend the living space of apartments.⁵² For example, provisions around kitchen and dining areas specify that such areas should be large enough for families to cook, socialise and eat together.⁵³ Specifically, the guidelines state:

The dining area should accommodate seating at a rate of two dining spaces per bedroom and have a minimum area of 9m² in order to allow for communal eating. Furniture such as a dining table, chairs and storage should fit in the dining room, in addition to circulation space.⁵⁴

At the building level, the guidelines focus on amenities and the need for accessible and flexible building design. They address the need for private indoor and outdoor amenity spaces to support a range of age groups and activities. The guidelines also specify that buildings should incorporate common areas to support social interaction between neighbours.⁵⁵ The guidelines further provide that a portion of required amenity space, specifically a minimum of 25%, should be designed for children and youth.⁵⁶

At the neighbourhood level, the guidelines focus on ensuring community services and infrastructure is available and accessible. For example, they address:

- Mobility—relating to safe mobility networks to encourage independence and active transport of children.
- Parks and open spaces—outlining neighbourhoods should include a variety of types of parks and open spaces that can be easily accessed and meet a diverse range of needs.
- Shared use and integrated co-located community services and facilities—outlining community services and facilities should be co-located with new developments to guarantee shared use along with inclusive and efficient program delivery.
- Civic engagement—referring to the engagement of children and youth in the planning and design process.⁵⁷

⁵¹ Ms Rachel Dapiran, *Transcript of evidence*, p. 13.

⁵² City of Toronto, *Growing up: Planning for children in new vertical communities*, pp. 40–49.

⁵³ *Ibid.*, p. 44.

⁵⁴ *Ibid.*

⁵⁵ *Ibid.*, pp. 28–39.

⁵⁶ *Ibid.*, p. 32.

⁵⁷ *Ibid.*, pp. 14–27.

The Committee notes that these guidelines offer useful recommendations for family-friendly living. The Committee also highlights that Victoria does not currently have any specific guidance on apartment living for families.

FINDING 23: The Toronto *Growing Up: Planning for Children in New Vertical Communities Urban Design Guidelines* provide a framework for the implementation of family-friendly apartment design standards.

Planning and the local context

Some stakeholders drew attention to Toronto as an example of neighbourhood planning in relation to apartment design.⁵⁸ Part 1.0 of the *Growing Up: Planning for Children in New Vertical Communities Urban Design Guidelines* relates to community building, including planning for development to have access to local open space.⁵⁹ The guidelines specify that vertical communities are more liveable when the public realm is clearly planned to support the specific needs of apartments with children and youth.⁶⁰

At the public hearings, the VPA told the Committee that the guidelines represent best practice. The VPA noted that the division of the guidelines into the unit level, building level and neighbourhood level is valuable to precinct planning.⁶¹ It gave the example that:

So look first at the neighbourhood—what the interactions are with green space, look at the building and the space between buildings—and then obviously functional design of an internal unit. That is what they have done.⁶²

In its submission, the VPA also outlined that governance and regulation in Toronto extends to providing ‘guidance on external relationships and the quality of [the] public realm’.⁶³

Ignite told the Committee that the guidelines are also aimed at increasing density within neighbourhoods, rather than continuing urban expansion, due to difficulties around infrastructure and related costs.⁶⁴ In managing density, Maribyrnong City Council explained that the plot ratio – the ratio between the gross floor area of a building and the area of the site – is a concept that has been adopted in Toronto. It is generally applied in high density areas and is an effective tool to manage the use of land intensity.⁶⁵

⁵⁸ Ms Rachel Dapiran, *Transcript of evidence*, p. 13.

⁵⁹ City of Toronto, *Growing up: Planning for children in new vertical communities*, p. 14.

⁶⁰ Ibid.

⁶¹ Ms Rachel Dapiran, *Transcript of evidence*, p. 13.

⁶² Ibid.

⁶³ Victorian Planning Authority, *Submission 15*, p. 3.

⁶⁴ Ms Arianna Garay, *Transcript of evidence*, p. 20.

⁶⁵ Maribyrnong City Council, *Submission 22*, received 29 October 2021, p. 9.

Overall, the Committee notes that Toronto has strong policies in place around planning and local context considerations and offers an example which Victoria can draw lessons from.

FINDING 24: Toronto has provisions in place around planning and local context considerations, particularly through the *Growing Up: Planning for Children in New Vertical Communities Urban Design Guidelines*.

4.3 Auckland

Auckland has a population of approximately 1.7 million and is the quickest growing region in New Zealand.⁶⁶ The Auckland Council reports that around one third of New Zealand's population lives in Auckland and that this proportion is projected to increase to 39% by 2043.⁶⁷

The Auckland Council's *Land Use Scenario i11* forecasts that the total population of Auckland could reach 2.38 million by 2048, representing an increase of 720,000 people from 2018.⁶⁸ It is predicted that Auckland could need another 313,000 dwellings as a result.⁶⁹ While Auckland generally has a younger age composition, between 2018 and 2048 it is projected that it will experience a significant increase in senior residents and that they will make up a greater proportion of Auckland's population.⁷⁰

It is anticipated that Auckland will experience an increase in apartment living, as seen in other international jurisdictions, including due to housing supply shortages and the increased standards for apartments discussed below.⁷¹ The *Auckland Plan 2050* (see Section 4.3.2) reflects the fact that Aucklanders' lifestyles and housing preferences are changing, for example, there has been a positive increase in people purchasing apartments that are close to transport corridors in recent years.⁷²

4.3.1 Governance and regulation of apartment design standards

The governance and regulation of apartment design standards in Auckland is based on several key policies and guidelines. Unlike Toronto, and like New South Wales, these policies employ a primarily prescriptive approach and use guidance as additional direction.

⁶⁶ Stats NZ, *Auckland population may hit 2 million in early 2030s*, 2021, <<https://www.stats.govt.nz/news/auckland-population-may-hit-2-million-in-early-2030s>> accessed 3 June 2022.

⁶⁷ Auckland Council, *Auckland's population*, 2022, <<https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/auckland-plan/about-the-auckland-plan/Pages/aucklands-population.aspx>> accessed 3 June 2022.

⁶⁸ Auckland Council, *Auckland Plan 2050*, 2018, p. 13.

⁶⁹ Ibid.

⁷⁰ Ibid., pp. 15–16.

⁷¹ Daniel Dunkley, 'It's time for a mindset shift on apartments', *Stuff*, 8 July 2021, <<https://www.stuff.co.nz/business/opinion-analysis/300351574/its-time-for-a-mindset-shift-on-apartments>> accessed 3 June 2022.

⁷² Auckland Council, *Auckland Plan 2050*, p. 94.

New Zealand Building Code

Like the National Construction Code (NCC) in Australia, all building work in New Zealand must meet the performance standards of the national *New Zealand Building Code* (the Building Code).⁷³ Legislation and regulations work together to form the building regulatory system, which sets out a framework to promote good quality decision making:

- Building Act 2004 – the primary legislation governing the building and construction industry
- Building Code – contained in Schedule 1 of the Building Regulations 1992, sets the minimum performance standards buildings must meet
- Other Building Regulations – detail particular building controls (eg prescribed forms, list of specified systems, definitions of ‘change the use’ and ‘moderate earthquake’, levies, fees and infringements).⁷⁴

The building and construction sector is largely regulated by the New Zealand Ministry of Business, Innovation and Employment, which works together with building practitioners, government agencies, other regulators, and the construction industry to understand what matters to the sector and to improve the regulatory system.⁷⁵

The Building Code, contained in Schedule 1 of the *Building Regulations 1992* (NZ), sets performance standards that all new building work must meet, and covers aspects such as stability, protection from fire, access, safety, natural light, and energy efficiency in individual clauses.⁷⁶ The Building Code is supported by the *New Zealand Building Code Handbook* that outlines the objectives and required function of each clause.⁷⁷

Overall, the national building regulatory system works alongside other legislation, including council bylaws, as discussed in detail below.⁷⁸

Auckland Unitary Plan

The *Auckland Unitary Plan* (the Plan) guides the use of Auckland’s natural and physical resources, including land development and specifically, ‘how to create a higher quality and more compact Auckland’.⁷⁹ Extensive consultation on the initial plan commenced in March 2013 and it became operative in part in November 2016.⁸⁰

⁷³ NZ Ministry of Business, Innovation and Employment, *How the Building Code works*, <<https://www.building.govt.nz/building-code-compliance/how-the-building-code-works>> accessed 3 June 2022.

⁷⁴ Ibid.

⁷⁵ Ibid.

⁷⁶ NZ Ministry of Business, Innovation and Employment, *New Zealand Building Code Handbook*, 2014, p. 3.

⁷⁷ See, for example, Ibid., p. 72.

⁷⁸ NZ Ministry of Business, *How the Building Code works*.

⁷⁹ Auckland Council, *What is the Auckland Unitary Plan?*, <<https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-by-laws/our-plans-strategies/unitary-plan/Pages/what-is-the-auckland-unitary-plan.aspx>> accessed 3 June 2022.

⁸⁰ Auckland Council, *History of the Auckland Unitary Plan*, <<https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-by-laws/our-plans-strategies/unitary-plan/history-unitary-plan/Pages/history-auckland-unitary-plan.aspx>> accessed 3 June 2022.

The Plan is established under the *Resource Management Act 1991* (NZ) and has three key roles:

1. it describes how the people and communities of the Auckland region will manage Auckland's natural and physical resources while enabling growth and development and protecting the things people and communities value;
2. it provides the regulatory framework to help make Auckland a quality place to live, attractive to people and businesses and a place where environmental standards are respected and upheld; and
3. it is a principal statutory planning document for Auckland. Other relevant planning documents include the Auckland Plan, the Auckland Long-Term Plan and the Auckland Regional Land Transport Plan.⁸¹

The Auckland Council is responsible for the observance of each provision of the Plan.⁸² 'Section H6. Residential – Terrace Housing and Apartment Buildings Zone' of the Plan outlines the objectives, policies, and standards for terrace housing and apartments in all zones across Auckland.⁸³ The standards are applied to all buildings and resource consent is required for all dwellings to:

- achieve the planned urban built character of the zone;
- achieve attractive and safe streets and public open spaces;
- manage the effects of development on adjoining sites, including visual amenity, privacy and access to daylight and sunlight; and
- achieve high quality on-site living environments.⁸⁴

Notably, the standards include measures for minimum access to daylight, discussed below, and minimum dwelling size (see Sections 5.2 and 5.3 for further discussion).⁸⁵

Apartment Design Guide and Auckland Design Manual

Auckland's *Apartment Design Guide* (the Guide) supplements the Plan, providing guidance on apartment design requirements in the City of Auckland. The Guide is a subset of Auckland's broader guidance on building design set out in the *Auckland Design Manual*, which also includes a *Universal Design Guide*, *Terrace Housing Guide* and *Mixed-Use Design Guide*.⁸⁶

⁸¹ Auckland Council, *Auckland Unitary Plan Operative in part: Chapter A Introduction*, 2022, pp. 1–2.

⁸² *Ibid.*, p. 3.

⁸³ Auckland Council, *Auckland Unitary Plan Operative in part H6 Residential – Terrace Housing and Apartment Buildings Zone*, 2022.

⁸⁴ *Ibid.*, p. 1.

⁸⁵ *Ibid.*, pp. 18–20, 23.

⁸⁶ Auckland Council, *Auckland Design Manual*, <<https://www.aucklanddesignmanual.co.nz>> accessed 3 June 2022.

The advice provided in the Guide is detailed in nature and clearly divides design information into categories of:

- site design, including protecting and enhancing natural ecology and habitat with consideration to Māori cultural values, and connection to current and future neighbourhoods
- building placement, including separation and outlook, privacy, light and sun
- street to door front, considering the transition of a building to the public street, safety and security
- outdoor spaces, describing good design of outdoor spaces to enhance apartment developments and considering balconies, private outdoor space, service areas, storm water and landscape management
- accommodating cars, considering arrangements and accessibility of vehicle parking and vehicle access
- the apartment building itself, outlining design practice for different apartment building types, building form including setbacks, apartment layouts and sustainable design.⁸⁷

The Auckland Council outlined several comparative case studies in its apartment design guidance and references Victorian examples of good high-density developments in long, narrow sites.⁸⁸ The Department of Environment, Land, Water and Planning told the Committee that broadly, during the stages of developing BADS, best practice in other jurisdictions, including Auckland, was considered.⁸⁹

4.3.2 Adaptability to Victorian context

In assessing the adaptability of apartment design standards in Auckland to Victoria, the Committee focussed on daylight, natural ventilation, building setback, and planning and the local context.

Daylight

Natural light requirements are prescribed by Clause G7 of the Building Code. The *Building Code Handbook* specifies the amount of natural light required, stating that '[n]atural light shall provide an illuminance of no less than 30 lux at floor level for 75 percent of the standard year', which is defined as 'between 8 am and 5 pm each day'.⁹⁰

⁸⁷ Auckland Council, *Apartment building design: Introduction*, <<https://www.aucklanddesignmanual.co.nz/sites-and-buildings/apartments#/sites-and-buildings/apartments/guidance/introduction>> accessed 3 June 2022.

⁸⁸ Auckland Council, *Apartment building design: Case studies: Chapel Street, St Kilda, Melbourne*, <https://www.aucklanddesignmanual.co.nz/sites-and-buildings/apartments/case-studies/chapel_street> accessed 3 June 2022.

⁸⁹ Mr Julian Lyngcoln, Deputy Secretary, Planning, Department of Environment, Land, Water and Planning, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 50.

⁹⁰ NZ Ministry of Business, *New Zealand Building Code Handbook*, pp. 64, 148b.

'Section H6.6.14. Daylight' in the Plan also prescribes a standard for daylight, to ensure adequate daylight for living areas and bedrooms in dwellings, in combination with outlook and building setback.⁹¹ The Committee notes that the Plan does not stipulate a minimum amount of suitable daylight in apartments, however, this is legislated by the Building Code, with further guidance in the Guide, described below.

The Guide states that apartments should optimise 'daylight access ... to reduce the need for energy reliant alternatives.'⁹² In addition to the national requirements, the Guide outlines that 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 am and 3 pm in mid-winter.⁹³

Some stakeholders drew attention to Auckland's daylight standards as exceeding guidance and standards of any Australian jurisdiction, including Victoria.⁹⁴ Darebin City Council described the daylight provisions outlined in the Guide as 'pushing boundaries when it comes to providing guidance on daylight as well as communal open space'.⁹⁵

As detailed further at Section 5.3, Victoria's BADS do not specify the amount of light required to meet a particular standard of daylight access, however, there are multiple factors that contribute to the provisions of daylight and sunlight. Accordingly, the Guide also suggests limiting single aspect apartments with a southerly aspect (southwest through to southeast) to a maximum of 10% of the total units proposed.⁹⁶

FINDING 25: Provisions in the *New Zealand Building Code* and the *Auckland Unitary Plan* and additional guidance in the *Auckland Apartment Design Guide* highlight that regulation and guidance on measurable access to daylight in apartments is more prescriptive in Auckland than Victoria.

Natural ventilation

The *New Zealand Building Code Handbook* states that '[s]paces within buildings shall have means of ventilation with outdoor air that will provide an adequate number of air changes to maintain air purity.'⁹⁷ 'Building Code Clause G4 – Ventilation' provides that people will be safeguarded from illness or loss of amenity due to lack of fresh air.⁹⁸

⁹¹ Auckland Council, *Auckland Unitary Plan Operative in part H6 Residential – Terrace Housing and Apartment Buildings Zone*, pp. 18–20.

⁹² Auckland Council, *Apartment building design: Energy efficiency - space heating and cooling and use of solar energy*, <<https://www.aucklanddesignmanual.co.nz/sites-and-buildings/apartments/guidance/the-building/sustainable-design/energy-efficiency-space-heating>> accessed 3 June 2022.

⁹³ Auckland Council, *Apartment building design: Designing for light and sun*, <<https://www.aucklanddesignmanual.co.nz/sites-and-buildings/apartments#/sites-and-buildings/apartments/guidance/placing-the-building/designing-for-light-sun>> accessed 3 June 2022.

⁹⁴ Darebin City Council, *Submission 40*, p. 3.

⁹⁵ Ibid.

⁹⁶ Auckland Council, *Apartment building design: Designing for light and sun*.

⁹⁷ NZ Ministry of Business, *New Zealand Building Code Handbook*, p. 60.

⁹⁸ Ibid.

While it does not give a measurable standard, it does state that buildings must have a way of removing products including odours from cooking and waste storage, moisture from bathing, and pathogens such as viruses.⁹⁹

Although there is no specific clause prescribing ventilation or openable windows in the Plan, all dwellings must have access to a minimum outdoor space as specified in 'H6.6.1. Outdoor living space'.¹⁰⁰ Minimum outdoor living spaces for ground floor apartments must be at least 20 metres square and any balcony must have a minimum dimension of 1.8 metres. Outdoor living spaces must be directly accessible from the principal living room, dining room or kitchen to support natural ventilation.¹⁰¹

The Darebin City Council drew attention to Auckland Council's guidance on natural ventilation.¹⁰² The Guide states that apartments should optimise 'natural ventilation, to reduce the need for energy reliant alternatives'¹⁰³ and outlines that this can be achieved by 'allowing controllable natural ventilation through the use of adjustable vents or operable windows'.¹⁰⁴

The Guide further states that a building deeper than 14 metres cannot be naturally ventilated and suggests creating cross ventilation with narrow building depths, dual aspect units and corner aspect units.¹⁰⁵ Additionally, the guidance suggests a number of design solutions to promote natural ventilation as an environmentally preferable and often economically advantageous option.¹⁰⁶ The Committee observed that the Guide is particularly prescriptive in relation to design for natural ventilation in apartments.

Ventilation of individual apartments within Victoria is discussed in Section 5.8 and communal spaces in Section 6.8 of this report.

FINDING 26: Natural ventilation in apartments and apartment buildings is prescribed in the *New Zealand Building Code*, supported by the Auckland Council's *Unitary Plan* through mandating of direct access to private outdoor space. This is strengthened by the detailed *Apartment Design Guide* which outlines design solutions to promote natural ventilation.

⁹⁹ Ibid.

¹⁰⁰ Auckland Council, *Auckland Unitary Plan Operative in part H6 Residential – Terrace Housing and Apartment Buildings Zone*, p. 21.

¹⁰¹ Ibid.

¹⁰² Darebin City Council, *Submission 40*, p. 16.

¹⁰³ Auckland Council, *Apartment building design: Energy efficiency - space heating and cooling and use of solar energy*.

¹⁰⁴ Auckland Council, *Apartment building design: Energy efficiency - the building 'envelope'*, <<https://www.aucklanddesignmanual.co.nz/sites-and-buildings/apartments#/sites-and-buildings/apartments/guidance/the-building/sustainable-design/energy-efficiency-building-envelope>> accessed 3 June 2022.

¹⁰⁵ Auckland Council, *Mixed use development design: Ventilation*, <<https://www.aucklanddesignmanual.co.nz/sites-and-buildings/mixed-use/guidance/thebuilding/buildingperformance/ventilation>> accessed 3 June 2022.

¹⁰⁶ Ibid.

Building setback

The issue of building setback is not covered in the *New Zealand Building Code Handbook*. However, building setbacks, as related to daylight, are prescribed in detail in clause 'H6.6.14. – Daylight' of the Plan.¹⁰⁷

The Guide also covers building setbacks but notes that the required setback varies depending on the area and other buildings.¹⁰⁸ It describes that apartment buildings in residential streets will likely need a setback to fit in with other dwellings, however, apartment buildings with commercial ground floors will often have no setback in line with other commercial buildings.¹⁰⁹ The guidance notes that setbacks can provide for landscaping and trees, open space, light, air, privacy, and allow windows and articulation.¹¹⁰

Planning and the local context

The *Auckland Plan 2050* was adopted in June 2018. It is Auckland's long-term spatial plan, and 'is required by legislation to contribute to Auckland's social, economic, environmental and cultural well-being'.¹¹¹ The *Auckland Plan 2050* comprises six outcomes including 'Homes and Places', with clear links between directions and measures, to ensure 'Aucklanders live in secure, healthy, and affordable homes, and have access to a range of inclusive public places'.¹¹² Four separate 'Directions' within the outcome cover developing quality urban form, sufficient and accessible public spaces, secure and affordable housing, and accelerating the construction of homes to meet changing needs.¹¹³

Acknowledging the increasing population, the *Auckland Plan 2050* outlines that the current level of construction is not meeting demand and that a substantial change in how new housing is delivered is needed.¹¹⁴ It states specifically that Auckland will need to build more apartments, both for individuals and large families.¹¹⁵ The *Auckland Plan 2050* includes a robust monitoring framework with five measures related to the Homes and Places outcome.¹¹⁶

¹⁰⁷ Auckland Council, *Auckland Unitary Plan Operative in part H6 Residential – Terrace Housing and Apartment Buildings Zone*, pp. 18–20.

¹⁰⁸ Auckland Council, *Apartment building design: Building setbacks (yards)*, <<https://www.aucklanddesignmanual.co.nz/sites-and-buildings/apartments#/sites-and-buildings/apartments/guidance/the-building/principal-components-controlling-building-form/building-setbacks>> accessed 3 June 2022.

¹⁰⁹ Ibid.

¹¹⁰ Ibid.

¹¹¹ Auckland Council, *Auckland Plan 2050*, p. 5.

¹¹² Ibid., p. 6.

¹¹³ Auckland Council, *Outcome: Homes and places*, <<https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-by-laws/our-plans-strategies/auckland-plan/homes-places/Pages/default.aspx>> accessed 3 June 2022.

¹¹⁴ Auckland Council, *Auckland Plan 2050*, p. 94.

¹¹⁵ Ibid.

¹¹⁶ Ibid., p. 293.

Overall, the Committee notes that Auckland has a strong long-term plan that is adapting to its forecast in changing needs in the local context with measurable outcomes. Together with a robust regulatory building framework at the national and local level and detailed additional guidance relating to apartments in the form of the detailed *Apartment Design Guide*, Auckland provides an example of a holistic and proactive approach to developing liveable apartments and neighbourhoods.

FINDING 27: Auckland has provisions in place around planning and local context considerations, particularly through the *Auckland Plan 2050*, to support the growing population and trends towards apartment living.

5 Improvements to dwelling amenity

This chapter summarises further improvements that could be made to the liveability of apartments and apartment developments in Victoria. With consideration to national and international approaches, Chapter 5 specifically focusses on the details of dwelling amenity that may be enhanced to increase liveability of apartments in Victoria.

5.1 Accessibility and universal design

The Committee acknowledges the recent 2021 improvements to the *Better Apartments Design Standards* (BADs) made to several areas relating to dwelling amenity, including accessibility and universal design.¹ However, there was strong sentiment in the evidence collected by the Committee arguing that further development of BADs should be considered.

The objective of clauses (Clause 58.05-1 and Clause 55.05-1) contained in Victoria Planning Provision (VPP) Standard D17, relating to accessibility, is only 'to ensure the design of dwellings meets the needs of people with limited mobility'. However, the guidance provided in this Standard outlines that:

Accessibility in design promotes equal access to apartments for all community members including those with limited mobility, families with young children and older people. Apartments which comply with the accessibility standard can be easily altered to meet changing needs of residents and ensures housing stock caters for a diverse range of household types over time.²

The Committee notes that this objective does not encompass a greater definition of accessibility and is narrowly focussed on limited mobility. In its submission, the Australian Institute of Architects (AIA) explained that the standards generally focus on individuals with limited mobility but do not extend to other disabilities, also noting that

1 Universal design is defined by the Australian Department of Social Services as: 'housing that meets the needs of all people at various stages of their lives, including people with a disability and senior Australians, and its impact could be profound. Enabling key living spaces and features to be more easily and cost effectively adapted to meet changing needs and abilities, means safer, more suitable housing. It can help increase social inclusion, improve health outcomes, and allow greater independence and increased opportunities for anyone experiencing disability.' See Australian Government Department of Social Services, *Liveable housing design*, 2020, <<https://www.dss.gov.au/disability-and-carers-programs-services-government-international/liveable-housing-design#:~:text=Universal%20housing%20design%20is%20housing,its%20impact%20could%20be%20profound>> accessed 2 June 2022.

2 Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, 2021, p. 139.

apartment design relies heavily on the requirements of the National Construction Code (NCC), which only sets minimum standards.³

The AIA argued that the Victorian Government should develop and promote much higher standards for universal accessibility in apartments and apartment complexes that go beyond the NCC and the current standards set out in BADS, specifically referencing standards in the *Livable Housing Design Guidelines*.⁴ The Commissioner for Senior Victorians also outlined the importance of universal design principles in its submission, particularly the inclusion of items such as bathroom rails, wider doorways, and external design minimising steps to facilitate safe use of mobility devices and therefore removing the need for retrofitting.⁵

At the public hearings, the Department of Environment, Land, Water and Planning (DELWP) told the Committee that following the incorporation of certain minimum accessibility standards into the original BADS (2017), new accessible housing requirements would be incorporated into the NCC and come into effect in September 2022.⁶ DELWP estimated that by 2050, this change will mean that 50% of apartments across Victoria will be 'accessible', meeting the basic accessibility features outlined in the Standard.⁷

The Victorian Building Authority (VBA) advised the Committee, through both its submission and at the public hearings, of its support for the adoption of mandatory accessibility standards in the NCC to increase the availability of Australian homes with accessibility features.⁸ The VBA explained that the reforms were enacted following significant advocacy from Victoria at a national Building Ministers meeting in 2021. As a result, particular standards from the *Livable Housing Design Guidelines* will mean that basic accessibility features will be included in all newly constructed homes and apartments.⁹

Despite this, the Committee received evidence from various organisations which believe that the accessibility requirements should apply to 100% of dwellings in an apartment development. Several local councils encouraged further clarity and expansion of Standard D17 and associated guidelines. For example, the City of Greater Dandenong highlighted further improvements that could be made to the Standard, including that it currently does not contain any decision guidelines or a requirement for an accessible

³ Australian Institute of Architects, *Submission 54*, received 12 November 2021, p. 12.

⁴ Ibid., p. 13. The Livable Housing Design Guidelines were launched in 2010 by the not-for-profit partnership Livable Housing Australia and provide Australia's only best practice guidelines for liveable housing agreed in partnership between community, consumer groups, government and industry: see Livable Housing Australia, *About LHA*, <<https://livablehousingaustralia.org.au/about-lha-3>> accessed 2 June 2022.

⁵ Commissioner for Senior Victorians, *Submission 58*, received 11 May 2022, pp. 4–5.

⁶ Dr Trevor Pisciotta, Executive Director, Building, Department of Environment, Land, Water and Planning, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 58.

⁷ Ibid., p. 59.

⁸ Dr Todd Bentley, Chief Risk Officer, Victorian Building Authority, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 21; Victorian Building Authority, *Submission 23*, received 29 October 2021, p. 2.

⁹ Dr Todd Bentley, *Transcript of evidence*, p. 21.

path from the entry of a building or from the car parking space to the door of the individual apartment.¹⁰

In addition to accessibility, the Committee also considered adaptability in terms of how it may support accessibility and provide for universal design. The AIA suggested that the current BADS fail to accommodate for ‘adaptability’, which refers to the ability to readily modify or retrofit apartments to meet the NCC Accessibility Standard of AS1428.1.¹¹ Visionary Design Development noted in its submission that guidance on layouts is not adaptable or accessible, and no definitions are provided in BADS for ‘adaptable’ or ‘easily altered’.¹²

The City of Port Phillip suggested that adaptability should be ensured through requiring non-load bearing internal walls to be removable or able to be reinstated to adapt to changing household composition and size, and that buildings should be designed such that apartments of varying sizes are grouped together to enable larger apartments.¹³ This notion was also supported by the Moonee Valley City Council which believes apartments should include, where possible, flexible floor plates to allow for reconfiguration of the internal layout.¹⁴

FINDING 28: The objective of the Better Apartments Design Standard D17 and associated guidelines on accessibility are focussed on limited mobility and do not encompass individuals or groups considered in a broader definition of accessibility.

RECOMMENDATION 1: Following the implementation of the update to the National Construction Code, the Department of Environment, Land, Water and Planning expand Better Apartments Design Standard D17 and associated guidelines to include a broader definition of accessibility beyond mobility.

5.2 Apartment size

Evidence assessed by the Committee highlighted contrasting views on whether a total minimum apartment size should be stipulated in the VPPs or BADS.

The Office of the Victorian Government Architect (OVGA) believed that using minimum dimensions for bedrooms and living areas (see Section 5.4) instead of setting minimum apartment sizes has unintended consequences on other parts of apartments, such as living and dining areas.¹⁵ The Committee heard from the OVGA that minimum sizes for

¹⁰ City of Greater Dandenong, *Submission 10*, received 22 October 2021, p. 3.

¹¹ Australian Institute of Architects, *Submission 54*, p. 13.

¹² Visionary Design Development, *Submission 34*, received 29 October 2021, p. 2.

¹³ City of Port Phillip, *Submission 11*, received 22 October 2021, p. 3.

¹⁴ Moonee Valley City Council, *Submission 37*, received 29 October 2021, p. 4.

¹⁵ Office of the Victorian Government Architect, *Submission 16*, received 27 October 2021, p. 1.

apartments was the second most important issue (following access to quality of air, ventilation and natural daylight) raised through the consultation from the 2015 DELWP 'Better Apartments' survey.¹⁶

The Municipal Association of Victoria (MAV) noted in its submission that there is no mandated overall minimum apartment size in Victoria and stated that conditions would improve if minimum standards were specified in the VPPs, pointing to New South Wales (NSW) standards as a good example of such regulation.¹⁷ This view was reflected by several individual councils in their submissions to the Inquiry:

- City of Port Phillip noted that currently there are no mechanisms to ensure apartments are of sufficient size and layout to achieve a high standard of amenity. There is insufficient guidance as to what apartment size and layouts constitute a minimum acceptable standard for healthy human habitation.¹⁸
- Monash City Council noted that while some improvements have been made to BADS recently, further improvements can be made including to minimum dwelling size, based on number of bedrooms, and internal ceiling heights.¹⁹
- Maroondah City Council believed the minimum apartment size for one-bedroom apartments should be prescribed or that councils should be allowed to vary these standards.²⁰
- Moonee Valley City Council suggested introducing mandatory minimum apartment size requirements will also correlate with functional dimensions for use of spaces.²¹
- City of Moreland proposed that better outcomes would be achieved if the VPPs specified minimum apartment sizes, as well as minimum room dimensions. It noted that work on this issue undertaken by the City of Melbourne and the City of Yarra, as well as in NSW, is informative.²²
- City of Melbourne argued that overall, there is a need for clearer metrics and often more generous minimum standards for the size of apartments and for open space, as well as consensus about the need for stronger or mandatory controls.²³ It encouraged consideration of additional minimum proportional requirements for key spaces such as dining and kitchen areas to ensure sufficiently sized and functional apartments.²⁴

The OVGA highlighted that minimum apartment sizes are specified in NSW, Western Australia (WA), Auckland, Dublin, Edinburgh, and many cities across the United States

¹⁶ Mr David Islip, Principal Adviser, Urban Design and Architecture, Office of the Victorian Government Architect, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 40.

¹⁷ Municipal Association of Victoria, *Submission 27*, received 29 October 2021, p. 9.

¹⁸ City of Port Phillip, *Submission 11*, p. 3.

¹⁹ Monash City Council, *Submission 29*, received 29 October 2021, p. 3.

²⁰ Maroondah City Council, *Submission 32*, received 29 October 2021, p. 9.

²¹ Moonee Valley City Council, *Submission 37*, p. 4.

²² Moreland City Council, *Submission 39*, received 30 October 2021, p. 11.

²³ Ms Bronwen Hamilton, Design Manager and Principal Urban Designer, City of Melbourne, Public hearing, Melbourne, 15 November 2022, *Transcript of evidence*, p. 13.

²⁴ City of Melbourne, *Submission 51*, received 1 November 2021, p. 13.

of America, and referenced the COVID-19 pandemic as highlighting the critical need for minimum apartment sizes as well as good design generally.²⁵

Conversely, the Housing Industry Association (HIA) has long believed it is not appropriate to mandate a minimum apartment size, arguing that owners and occupiers of apartments have a diverse range of needs, including for a particular sized dwelling, and that the construction industry provides what the market requires.²⁶ In its submission, HIA warned against overregulation and a 'one size fits all' approach as potentially having a negative impact on housing affordability and curbing diversity and innovation.²⁷ In this regard, HIA advocated against technical regulation in the planning system and instead proposed a clear distinction between matters governed by the planning and regulatory environment, and the technical and building environment, which is controlled through the NCC.²⁸ It was the belief of HIA that innovative and cost-effective design solutions are unlikely to be able to be quantified and codified and therefore will not be delivered through mandatory sizes, which will in turn be a disincentive to innovation in 'an already complex design process'.²⁹

In acknowledging and responding to the issue of mandating apartment size, DELWP advised the Committee that during phase one of BADS introduction there was widespread community concern around the size of apartments, light and ventilation particularly.³⁰ The issue of apartment size and room size were specifically raised through consultation during the first phase of BADS, with particular community concern around a notion of 'dogboxes that [DELWP] were seeing'.³¹ Respondents to the community survey for consultation noted that overall apartment size is directly linked to ensuring 'sufficient space and storage to suit any household type and life stage'.³² As an example, in its submission to the Committee, the Commissioner for Senior Victorians stated that overall size and space available within apartments and apartment developments are important factors in supporting 'ageing in place' and senior downsizers.³³ The Commissioner further contended that BADS should consider a future where residents will grow increasingly frailer and rely on the use of mobility aids.³⁴ DELWP noted that during the first phase of developing BADS there were apartment developments with 'quite small rooms', with many investors looking to rent the apartments out, therefore having less concern about whether an apartment or room was small, and DELWP acknowledged a need to intervene.³⁵

25 Mr David Islip, *Transcript of evidence*, p. 40.

26 Mr Mike Hermon, Executive Director, Planning and Development, Housing Industry Association, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, p. 31.

27 Housing Industry Association, *Submission 38*, received 30 October 2021, p. 3.

28 *Ibid.*

29 Mr Mike Hermon, *Transcript of evidence*, p. 31.

30 Mr Julian Lyngcoln, Deputy Secretary, Planning, Department of Environment, Land, Water and Planning, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 49.

31 *Ibid.*, p. 50.

32 Department of Environment, Land, Water and Planning, *Better Apartments public engagement report*, 2015, p. 13.

33 Commissioner for Senior Victorians, *Submission 58*, pp. 5–6.

34 *Ibid.*

35 Mr Julian Lyngcoln, *Transcript of evidence*, p. 50.

DELWP advised the Committee that while BADS does not contain minimum apartment dimensions, there are a number of standards that essentially dictate size, such as the requirements around lighting, which is unable to be achieved without a design being a certain size and a certain configuration.³⁶ DELWP anecdotally reported that the requirements in other standards had resulted in an increase in apartments of larger average size as well as ‘good sized rooms’. The department also acknowledged the ways in which the industry may seek to circumvent the intention of the standards through adding a storage room on a plan rather than a bedroom.³⁷ DELWP summarised that it will continue to monitor the matter of apartment size while remaining open to feedback and analysing the need for adjustments over time.³⁸

The Committee also received detailed evidence, not necessarily advocating for or against a minimum apartment size, but suggesting that there is related value in prescribing factors other than a minimum size or area of an apartment. AIA noted space should also take into consideration the height of an area. It outlined that ‘the qualitative aspects of good design are difficult to codify and there is an important role for Design Review Panels’.³⁹

Project HOME explained to the Committee that innovation works in both ways, and that the basis of design guidelines should consider how people live in apartments, not just size, providing an example of a room that needs to be 12 square metres being 2 metres wide and 6 metres deep, that is awkward and not useable.⁴⁰ Project HOME summarised that there may be situations that are relevant to the prescription of minimums, however, the best design guidelines also include furniture, for example a living or dining room with a minimum depth that needs to be able to accommodate a dining table that will seat four and have sufficient walking space.⁴¹ Project HOME added that standards may restrict architects to a certain extent, but can also maintain some liberation in design.⁴²

FINDING 29: While there are contrasting opinions on whether minimum apartment size should be stipulated within the Victoria Planning Provisions (VPPs), there is evidence to suggest that outlining a minimum size in the VPPs would support good design for new apartments throughout Victoria. New South Wales, Western Australia, Auckland, Dublin, Edinburgh, and many cities across the United States of America specify minimum apartment sizes.

RECOMMENDATION 2: The Department of Environment, Land, Water and Planning provide a minimum size for new apartments in its next review of the *Better Apartments Design Standards*.

³⁶ Ibid., pp. 50–51.

³⁷ Ibid., p. 51.

³⁸ Ibid., pp. 52–53.

³⁹ Australian Institute of Architects, *Submission 54*, p. 10.

⁴⁰ Dr Andrew Martel, Project HOME, Centre for Urban Research, School of Global, Urban and Social Studies, RMIT University, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 43.

⁴¹ Ibid.

⁴² Ibid.

5.3 Daylight

Access to daylight in individual dwellings is not represented by a particular standard of BADS, however, it is included in amenity issues through arrangements such as, but not limited to, layout and room size (see Section 5.4), windows (see Section 5.8), aspect (see Section 5.9) and building setback (see Section 6.3).⁴³

The Apartment Design Guidelines (the Guidelines) acknowledge that adequate daylight is important for both resident health and energy efficiency.⁴⁴ In its *Case for Good Design – A guide for government*, in relation to dwellings, the OVGA explains that '[g]etting light into our living spaces is vital. People value daylight – there is a link between satisfaction and poor light in homes'.⁴⁵

Various studies have established links between levels of natural light in homes and residents' physical and mental health.⁴⁶ 'A study of residents in an apartment building in Brisbane found natural light was associated with a sense of spaciousness and increased liveability.'⁴⁷

The submission from the Darebin City Council referred to a number of studies that showed there is strong correlation between daylight and people's physical and mental health.⁴⁸ The Urban Design Forum Australia specifically conveyed the need to improve design standards and environmental quality, including daylight and sunlight, to support wellbeing.⁴⁹ In 2019, the Council Alliance for a Sustainable Built Environment (CASBE) undertook specific research into the impact of daylight in buildings on human health. It noted that the first stage of this project found that exposure to daylight is significantly beneficial for a wide range of human health conditions and wellbeing, however, it is unclear what the minimum exposure levels should be.⁵⁰ CASBE further stated that the second stage of this project is currently being undertaken in conjunction with DELWP and a report will likely be finalised in mid-2022.⁵¹

DELWP also outlined in the *Better Apartments – Public Consultation Report* that some councils and planning and design stakeholders 'asked that the standard define what is meant by 'adequate' daylight and provide a minimum daylight lux level to help the decision-making process'.⁵² The Committee notes, however, that the Guidelines and the VPPs refer to 'reasonable' and 'adequate' daylight but neither define or quantify it.⁵³ There were numerous submissions to the Inquiry that suggested the Victorian standards

⁴³ Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, p. 5.

⁴⁴ Ibid., p. 117.

⁴⁵ Office of the Victorian Government Architect, *The case for good design: A guide for government*, 2019, p. 40.

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ Darebin City Council, *Submission 40*, received 31 October 2021, p. 5.

⁴⁹ Urban Design Forum Australia, *Submission 53*, received 7 November 2021, p. 4.

⁵⁰ Council Alliance for a Sustainable Built Environment, *Submission 33*, received 29 October 2021, p. 3.

⁵¹ Ibid., p. 4.

⁵² Department of Environment, Land, Water and Planning, *Better Apartments public consultation report*, 2017, p. 28.

⁵³ Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria; Victoria Planning Provisions*.

relating to daylight are insufficient and could benefit from further prescription and clarity, either by requiring daylight modelling, or testing and prescribing a minimum amount of access, or through a specific standalone daylight access standard.⁵⁴ Conversely, the view of HIA provided to the Committee at the hearings was that daylight in dwellings is sufficiently covered within the NCC and that the NCC is therefore the relevant tool to manage or prescribe changes or improvements to access to daylight in apartments (this is discussed further at Section 5.8).⁵⁵

Hobsons Bay City Council advocated that the current daylight standards should be amended to require that applicants provide daylight modelling as part of the application information.⁵⁶ This view was supported by the City of Yarra in circumstances where certain specified separation distances are not achieved for both existing and proposed habitable room windows.⁵⁷

Several councils suggested that a minimum measure of accessible daylight should be prescribed. The City of Port Phillip argued that the standards relating to building setbacks, room depth and windows should be amended to ensure a minimum amount of sunlight is received in apartments in mid-winter and that the standard relating to room depth specifically should be expanded.⁵⁸ It added that this will ensure that each apartment is able to receive an adequate amount of daylight, including south-facing single-aspect apartments. Further, the City of Port Phillip believed lux level testing,⁵⁹ through decision guidelines, should be required to ensure that adequate amounts of daylight are maintained.⁶⁰

While CASBE broadly supported the standards relating to daylight, it noted that some elements, such as building setbacks (discussed further at Section 6.3), could potentially compromise daylight provision, a view also communicated by the OVGA.⁶¹ Accordingly, CASBE also recommended a minimum amount of sunlight to be received in apartments in mid-winter, citing the approach adopted through the local government sustainability tool *Built Environment Sustainability Scorecard* (BESS) that requires that the living rooms of at least 70% of apartments receive a minimum of three hours direct sunlight between 9 am and 3 pm during the winter solstice.⁶² OVGA highlighted the difference between direct sunlight and daylight, and believed that it is important to introduce a

⁵⁴ See, for example, Bayside City Council, *Submission 25*, received 29 October 2021, p. 1; City of Greater Dandenong, *Submission 10*, p. 3; City of Port Phillip, *Submission 11*, p. 2.

⁵⁵ Mr Mike Hermon, *Transcript of evidence*, p. 37; Mr Roger Cooper, Senior Planning Adviser, Housing Industry Association, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, p. 37.

⁵⁶ Hobsons Bay City Council, *Submission 31*, received 29 October 2021, p. 2.

⁵⁷ City of Yarra, *Submission 30*, received 29 October 2021, p. 3.

⁵⁸ City of Port Phillip, *Submission 11*, p. 2.

⁵⁹ Lux is defined in the City of Melbourne Lighting Guidelines as a 'unit of measurement that provides a value for the amount of illumination that is present at a location'. Illuminance is 'the measure of the quantity of light incident on a point or a surface. It is measured in units of lux'. See City of Melbourne, *City of Melbourne lighting guidelines*, p. 15.

⁶⁰ City of Port Phillip, *Submission 11*, p. 2.

⁶¹ Council Alliance for a Sustainable Built Environment, *Submission 33*, p. 3; Office of the Victorian Government Architect, *Submission 16*, p. 1.

⁶² Council Alliance for a Sustainable Built Environment, *Submission 33*, p. 3.

specific metric around sunlight, separate to daylight which is different in terms of it being reflected light.⁶³

The BADS Guidelines acknowledge that room depth and height determine the amount and quality of daylight penetration through a window.⁶⁴ With relation to room depth, BADS states that applications for apartment developments should consider the ‘extent to which the habitable room is provided with reasonable daylight access through the number, size, location and orientation of windows’.⁶⁵

CASBE is currently undertaking research to determine whether the current standards in the Victorian regulatory system and the BESS are achieving best practice standards for daylight provision in apartments, and what further design features may be required to achieve the recommended standards.⁶⁶ While recognising the tension between designing for adequate daylight and ensuring appropriate shading for summer heatwaves, CASBE argued that the standard relating to room depth (see Section 5.4) should be improved to ensure that each apartment is able to receive an adequate amount of daylight, including south-facing single aspect apartments. It also encouraged lux level testing as a requirement to ensure that adequate amounts of daylight are maintained.⁶⁷

Moreland City Council stated that key factors in the liveability of apartments are outlook and access to daylight and sunlight, and also noted that building separation relates to providing these.⁶⁸ Its submission noted that building separation is considered in the Moreland Planning Scheme and that NSW specifically has a clear standard for how this should be measured in its jurisdiction.⁶⁹ Dr Tom Alves also explained in his submission that greater separation distances between apartment buildings aids with providing daylight access to apartments closer to the ground and that circulation spaces and other common areas of a building also benefit from natural light.⁷⁰ Regarding the link between building separation and daylight, the OVGA told the Committee that it is critical that the standard and metric relating to building separation is viewed as important, given the interdependencies of sunlight and daylight. The OVGA explained that an ‘apartment’s frontage is its principal and frequently only source of daylight and natural ventilation, especially if you are a single-aspect apartment’.⁷¹

Further, the Committee was told that any metric relating to daylight would need to be tested to ensure adequacy.⁷² There is no disincentive in BADS regarding south-facing

⁶³ Mr David Islip, *Transcript of evidence*, p. 44.

⁶⁴ Department of Environment, *Apartment design guidelines for Victoria*, p. 117.

⁶⁵ *Ibid.*

⁶⁶ Council Alliance for a Sustainable Built Environment, *Submission 33*, pp. 3–4.

⁶⁷ Ms Natasha Palich, Executive Officer, Council Alliance for a Sustainable Built Environment, Public hearing, Melbourne, 15 November 2022, *Transcript of evidence*, p. 3; Council Alliance for a Sustainable Built Environment, *Submission 33*, p. 3.

⁶⁸ Moreland City Council, *Submission 39*, p. 11.

⁶⁹ *Ibid.*

⁷⁰ Dr Tom Alves, Head of Development, Australian Housing and Urban Research Institute, *Submission 50*, received 31 October 2021, p. 8.

⁷¹ Mr David Islip, *Transcript of evidence*, p. 39.

⁷² *Ibid.*, p. 40.

apartments, however, NSW State Environment Planning Policy No 65 (SEPP 65) limits south-facing apartments to only 10%.⁷³ The OVGAs reported this has led to a reliance on privacy screens and at times obscure glazing, impacting daylight provision and outlook.⁷⁴

The City of Melbourne explained to the Committee how minimum standards around the depth of an apartment and the floor-to-ceiling height also impact daylight reaching apartments. The City of Melbourne noted apartments with deep spaces where the space central to the apartment may not have a window, stating that the current lack of controls affect study and work from home areas, noting the importance of these areas now in the COVID-19 climate.⁷⁵

In addition to supporting daylight modelling standards, the Maroondah City Council suggested performance standards for lightwells, which are discouraged, but not prohibited, through BADS.⁷⁶ BADS recommend avoiding the use of lightwells as the primary source of daylight to habitable rooms, and using lightwells as a secondary source of daylight to living rooms only.⁷⁷ Some councils, such as the City of Greater Dandenong, agreed with simply discouraging light wells, however, others such as the Darebin City Council noted that the use of lightwells as the only source of natural light is prohibited in other jurisdictions such as WA.⁷⁸

Darebin City Council also noted that the standards for snorkel windows in BADS are not best practice compared with other jurisdictions such as London and Auckland that have minimum daylight factor standards and minimum sunlight access requirements for new developments.⁷⁹

FINDING 30: The use of lightwells as a primary source of daylight is discouraged through the *Better Apartments Design Standards* (BADS). While there is no evidence to suggest if BADS had discouraged the use of lightwells in new apartments, some stakeholders believed lightwells should be prohibited in line with other jurisdictions such as Western Australia.

RECOMMENDATION 3: The Department of Environment, Land, Water and Planning review the position on lightwells in the next update of the *Better Apartments Design Standards*.

⁷³ Ibid.

⁷⁴ Ibid.

⁷⁵ Ms Lavanya Arulanandam, Senior Urban Designer, City of Melbourne, Public hearing, Melbourne, 15 November 2022, *Transcript of evidence*, p. 18.

⁷⁶ Maroondah City Council, *Submission 32*, p. 8.

⁷⁷ Department of Environment, *Apartment design guidelines for Victoria*, p. 17.

⁷⁸ City of Greater Dandenong, *Submission 10*, p. 3; Darebin City Council, *Submission 40*, p. 10.

⁷⁹ Darebin City Council, *Submission 40*, pp. 5–6.

FINDING 31: The *Better Apartments Design Standards* (BADS) and *Apartment Design Guidelines for Victoria* acknowledge the widely understood link between adequate daylight and resident health. While there is not a specific standard dedicated to daylight within BADS, as there are in other jurisdictions such as New South Wales, Western Australia and South Australia, there are several relevant standards that are observed to be directly connected, including layout and room size, windows, aspect and building setback.

RECOMMENDATION 4: The Department of Environment, Land, Water and Planning define and quantify ‘adequate daylight’ in the *Better Apartment Design Standards*.

FINDING 32: There is widespread evidence to suggest that specifying a minimum amount of sunlight in habitable rooms is beneficial to resident health.

RECOMMENDATION 5: In quantifying ‘adequate daylight’, the Department of Environment, Land, Water and Planning incorporate considerations around sunlight.

5.4 Layout and room sizes

The functional layout objective (Clause 58.07-1 and Clause 55.07-12) in BADS is to ensure dwellings provide functional areas that meet the needs of residents. BADS Standard D24 outlines acceptable minimum bedroom and living area dimensions (Tables 5.1 and 5.2), with the Guidelines outlining that:

Functional apartments have layouts that meet the needs of residents and room sizes and configurations appropriate for their intended use. Adaptable layouts provide for future household changes, which provides longevity of housing stock. The long-term needs of a community require a range of housing types so people of different ages, backgrounds and needs are provided for.⁸⁰

Tables 5.1. and 5.2 outline the acceptable minimum bedroom and living area dimensions provided for in BADS.

Table 5.1 Better Apartment Design Standards—minimum bedroom dimensions

Bedroom type	Minimum width (metres)	Minimum depth (metres)	Minimum area (square metres)
Main bedroom	3	3.4	10.2
All other bedrooms	3	3	9

Source: Department of Environment, Land, Water and Planning (DELWP), *Apartment design guidelines for Victoria*, 2021, p. 114.

⁸⁰ Department of Environment, *Apartment design guidelines for Victoria*, p. 114.

Table 5.2 Better Apartment Design Standards—minimum living area dimensions

Dwelling type	Minimum width (metres)	Minimum area (square metres)
Studio and 1 bedroom dwelling	3.3	10
2 or more bedroom dwelling	3.6	12

Source: Department of Environment, Land, Water and Planning (DELWP), *Apartment design guidelines for Victoria*, 2021, p. 114.

The Committee received clear evidence that argued for mandated minimum sizes in dining and kitchen spaces, with suggestions to particularly:

- introduce minimum open plan dimensions to accommodate a dining table and kitchen and include a standard that kitchens are not located as part of the main circulation space (such as hallway or entry space)⁸¹
- stipulate the dining area size, or if the kitchen bench is to be shared providing a requirement for larger benches and circulation spaces⁸²
- discourage kitchens being in corridors (often influenced by room depth guidelines)⁸³
- limit the extent of the minimum living room area that can be used for circulation areas, openings to other rooms/sharing of areas and spaces⁸⁴
- ensure all dwellings are required to provide a study or study nook given the demand for working at home arrangements.⁸⁵

While Standard D17 and B41 (accessibility) also outline bathroom design and minimum sizes of specific elements within bathrooms, the City of Port Phillip believed that overall there are currently no mechanisms to ensure apartments are of sufficient size and layout to achieve a high standard of amenity. Further, the City of Port Phillip noted that the current guidance on what apartment size and layouts constitute a minimum acceptable standard is not sufficient to support high standards of amenity for residents.⁸⁶

This view was echoed by the City of Yarra, which told the Committee that an element that appears to be missing from the Guidelines is size requirements for the whole open space and for the whole internal living area,⁸⁷ stating at the public hearings that:

At the moment we have minimum standards for bedrooms and we have minimum standards for the actual living areas, but we do not have any standards for the kitchen or dining areas. As a consequence of that we end up with apartments that have quite

⁸¹ City of Yarra, *Submission 30*, p. 4.

⁸² Maroondah City Council, *Submission 32*, p. 8.

⁸³ Office of the Victorian Government Architect, *Submission 16*, p. 1.

⁸⁴ Manningham Council, *Submission 36*, received 29 October 2021, p. 5.

⁸⁵ Ibid.

⁸⁶ City of Port Phillip, *Submission 11*, p. 3.

⁸⁷ Ms Amy Hodgen, Senior Coordinator, Statutory Planning, City of Yarra, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, p. 18.

good living—couch—areas, but then are missing a dining space, or alternatively a kitchen is sort of tucked away in a corridor.⁸⁸

The City of Yarra added that it would be helpful to have greater guidance, referring to NSW as a best practice jurisdiction that provides more guidance around the total apartment size and not just bedroom and living spaces.⁸⁹

FINDING 33: Better Apartment Design Standard D24 and associated guidelines are restricted to defining minimum bedroom and living spaces and may be influencing poor outcomes in other spaces such as kitchens and dining areas.

RECOMMENDATION 6: The Department of Environment, Land, Water and Planning include guidance around kitchen and dining minimum room size and layout within Better Apartment Design Standard D24.

5.5 Private open space

The Guidelines provide direction on what is considered adequate private open space through Standard D19, comprising three specific clauses, dependant on building height.⁹⁰ Regardless of building height, the Guidelines outline that:

Access to functional and usable private open spaces — outdoor spaces such as balconies, courtyards and terraces, accessible only to the particular apartment — allows occupants to extend their living spaces outdoors to enjoy a variety of recreations.

Balconies on taller buildings can be unpleasant, so the apartment standards provide flexibility to provide internal spaces instead (such as extra sitting areas, study areas and play areas for children).⁹¹

Standard D19 outlines that a dwelling should have access to private open space in the form of either a balcony, winter garden, rooftop garden, courtyard or terrace.⁹² Minimum balcony sizes vary according to the solar access to an apartment to minimise overshadowing of living areas. An apartment's orientation influences minimum balcony areas and dimensions.⁹³ Table 5.3. below illustrates minimum balcony dimensions.

⁸⁸ Ibid.

⁸⁹ Ibid.

⁹⁰ Department of Environment, *Apartment design guidelines for Victoria*, p. 129. Both Clause 55.05-4 (Private open space) and Clause 55.07-9 (Private open space above ground floor) apply to apartment developments of four storeys or less (excluding a basement). Clause 58.05-3 (Private open space) applies to apartment developments of five or more storeys (excluding a basement) in a residential zone and all apartment developments in other zones.

⁹¹ Ibid.

⁹² Ibid.

⁹³ Ibid., p. 131.

Table 5.3 Better Apartment Design Standards—minimum balcony dimensions

Orientation of dwelling	Dwelling type	Minimum area (square metres)	Minimum dimension (metres)
North (between north 20 degrees west to north 30 degrees east)	All	8	1.7
South (between south 30 degrees west to south 20 degrees east)	All	8	1.2
Any other orientation	Studio or 1 bedroom dwelling	8	1.8
	2-bedroom dwelling	8	2
	3 or more-bedroom dwelling	12	2.4

Source: Department of Environment, Land, Water and Planning (DELWP), *Apartment design guidelines for Victoria*, 2021, p. 130.

At a height of 40 metres (13 storeys) or more from the ground level, a balcony can be replaced with extra space in a living area or bedrooms.⁹⁴ If a balcony is being replaced with extra internal space, BADS outlines that it should be in addition to the minimum areas required under functional layout Standard D24.⁹⁵

Noting the reduction in outlined balcony widths since the introduction of BADS in 2017, Monash City Council raised concern with respect to the limited private open space already provided for residents of apartments.⁹⁶ Similarly, the City of Yarra did not support the update to Standards D19 reducing balcony sizes in apartments and encouraged winter gardens for developments over 40 metres.⁹⁷

Hobsons Bay City and Manningham Councils viewed the minimum standards for balcony dimensions as inadequate and affecting their useability for recreation and service needs of residents.⁹⁸ In this regard, Maribyrnong City Council suggested updating the ‘application requirements’ section of VPP Clauses 55 and 58 to include a requirement for a schedule outlining balcony dimensions.⁹⁹ Conversely, the Urban Development Institute of Australia, Victorian Division (UDIA Victoria) specifically highlighted the changes to balcony size requirements as broadly positive.¹⁰⁰

In terms of improving the amenity of balcony spaces, Maroondah City Council suggested additional space for planter boxes on balconies, similar and in addition to the minimum requirements for heating and cooling services on balconies.¹⁰¹

⁹⁴ Ibid., p. 133.

⁹⁵ Ibid.

⁹⁶ Monash City Council, *Submission 29*, p. 3.

⁹⁷ City of Yarra, *Submission 30*, p. 3.

⁹⁸ Hobsons Bay City Council, *Submission 31*, p. 3; Manningham Council, *Submission 36*, p. 3.

⁹⁹ Maribyrnong City Council, *Submission 22*, received 29 October 2021, p. 9.

¹⁰⁰ Urban Development Institute of Australia, Victorian Division, *Submission 26*, received 29 October 2021, p. 10.

¹⁰¹ Maroondah City Council, *Submission 32*, p. 9.

FINDING 34: Some local government stakeholders involved in the Inquiry argued that the minimum standard for private open space in the *Better Apartments Design Standards* is insufficient.

RECOMMENDATION 7: The Department of Environment, Land, Water and Planning review minimum standards for private open spaces in the *Better Apartments Design Standards*.

5.6 Storage

Standards D20 and B44 of BADS outline the minimum amount of storage that should be provided for in an apartment based on the number of bedrooms, and the minimum that should be located inside the dwelling (see Table 5.4).¹⁰² The total storage includes kitchen, bathroom and bedroom storage, but does not include bicycle or car storage.¹⁰³ The objective of the Standard is to ensure that adequate storage is provided for in each dwelling and acknowledges that secure and convenient storage improves the functionality of apartments.¹⁰⁴

Despite this, the OVGA believed that storage in new developments is not well handled and that minimum requirements should be more appropriately linked to apartment sizes.¹⁰⁵ This view was shared by Manningham Council, which believed there should be a minimum requirement of storage for each room to improve the quality, quantity and distribution of storage throughout a dwelling.¹⁰⁶ The Committee received several submissions that advocated the need for more storage generally, with the Australian Housing and Urban Research Institute (AHURI) highlighting this particularly in relation to addressing the issues highlighted by COVID-19.¹⁰⁷

In terms of external storage, such as storage cages, Maribyrnong City Council suggested the Standards should be updated to include better storage conditions to allow for better security, and concealment to limit exposure to deterioration of stored items.¹⁰⁸ In this regard, the OGVA highlighted that security and best practice location need better defining.¹⁰⁹

¹⁰² Department of Environment, *Apartment design guidelines for Victoria*, p. 123.

¹⁰³ *Ibid.*, pp. 123–124.

¹⁰⁴ *Ibid.*, p. 123.

¹⁰⁵ Office of the Victorian Government Architect, *Submission 16*, p. 2.

¹⁰⁶ Manningham Council, *Submission 36*, p. 4.

¹⁰⁷ Australian Housing and Urban Research Institute, *Submission 49*, received 31 October 2021, p. 5; Dr Tom Alves, *Submission 50*, p. 8; Blackburn Village Residents Group, *Submission 46*, received 31 October 2021, p. 11; Hobsons Bay City Council, *Submission 31*, p. 2.

¹⁰⁸ Maribyrnong City Council, *Submission 22*, p. 8.

¹⁰⁹ Office of the Victorian Government Architect, *Submission 16*, p. 2.

The need for bicycle storage was a common issue raised by several councils, with Frankston City Council suggesting that consideration should be given to the provision of cycle storage per apartment to encourage alternative modes of transport.¹¹⁰ The City of Yarra noted the links between sustainability initiatives and creating a requirement for sufficient bicycle storage.¹¹¹

Table 5.4. below illustrates minimum dwelling storage volumes as provided for in the Guidelines.

Table 5.4 Better Apartment Design Standards—minimum dwelling storage volume

Dwelling type	Total minimum storage volume (cubic metres)	Minimum storage volume within the dwelling (cubic metres)
Studio	8	5
1-bedroom dwelling	10	6
2-bedroom dwelling	14	9
3 or more-bedroom dwelling	18	12

Source: Department of Environment, Land, Water and Planning (DELWP), *Apartment design guidelines for Victoria*, 2021, p. 123.

FINDING 35: The minimum requirements for storage space outlined in Better Apartments Design Standard D20 and B44 are not necessarily sufficient for the needs of occupants in apartments of different sizes and do not include specific provisions for bicycle storage.

RECOMMENDATION 8: The Department of Environment, Land, Water and Planning review the concerns raised around minimum size for storage in new apartments, including to incorporate bicycle storage, in its next review of the *Better Apartments Design Standards*.

5.7 Outlook

While there is no specific requirement relating to outlook in BADS, it is considered under ‘Section 1 - Siting and Building Arrangement’, primarily throughout the standards on building setback and communal space.¹¹²

The Guidelines state that a key feature of outdoor communal open space is to provide access to outlook to residents,¹¹³ as illustrated in Figure 5.1. below:

¹¹⁰ Frankston City Council, *Submission 18*, received 28 October 2021, p. 3.

¹¹¹ City of Yarra, *Submission 30*, p. 5.

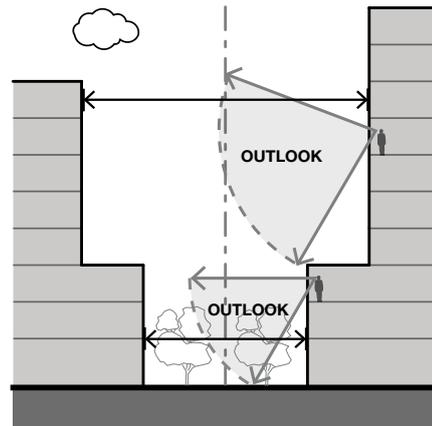
¹¹² Department of Environment, *Apartment design guidelines for Victoria*, pp. 11, 22.

¹¹³ *Ibid.*, p. 22.

Figure 5.1 Better Apartment Design Standards—building setback and outlook

Use building setbacks to provide outlook and a visual connection from a dwelling to its context and allowing for visual relief.

→ GUIDANCE: Greater building separation is required to achieve adequate outlook where there is not a strong connection to the street or ground such as between apartment towers.



Section diagram. Quality of outlook informs building setback.

Source: Department of Environment, Land, Water and Planning (DELWP), *Apartment design guidelines for Victoria*, 2021, p. 19.

Moreland City Council argued that the key factors in the liveability of apartments are outlook and access to daylight and sunlight, and noted that building separation relates to providing these. Its submission noted that building separation is included in the Moreland Planning Scheme and that NSW has a clear standard for how building separation should be measured.¹¹⁴ Darebin City Council noted that the issue of building separation often causes tensions between residents in existing and new developments, with new developments required to include privacy screening which may significantly affect amenity, often blocking primary outlooks.¹¹⁵

Dr Tom Alves provided further insight into the issue of balancing outlook and privacy, stating that where apartments are located in tall towers, the loss of reference to the ground plane means apartments facing one another feel closer, suggesting therefore that greater separation distances can be required to maintain a balance between privacy and outlook.¹¹⁶

5.8 Windows

The Committee heard from Project HOME that in Victoria, prior to the introduction of BADS, apartments were regularly being designed and constructed with windowless bedrooms at a rate of up to 30% per development:

up until recently you have been able to build a bedroom in an apartment without a window. No-one who is going to build their own dream house or apartment is going to have a bedroom with no window, but it was allowed under the regulations here in Victoria—although it is not allowed in New South Wales. We saw apartment blocks with up to 30 per cent of the bedrooms with no windows. When that changed, when BADS

¹¹⁴ Moreland City Council, *Submission 39*, p. 11.

¹¹⁵ Darebin City Council, *Submission 40*, pp. 6–7.

¹¹⁶ Dr Tom Alves, *Submission 50*, p. 8.

came in, now that is just not an option, so developers work around that, builders work around that, and now every bedroom has a window.¹¹⁷

Standards D26 and B48 in BADS outline that windows provide access to natural daylight, direct sunlight and airflow into apartments, contributing to the health and wellbeing of occupants. Apartments should preferably let in direct sunlight to help make the living environment pleasant and reduce energy use.¹¹⁸ The Guidelines state that:

- habitable rooms should have a window in an external wall of the building
- the functional areas of habitable rooms including living areas should be located directly adjacent to the window on an external wall
- borrowed light arrangements (where a room borrows light via an opening to another room) do not meet the expectations of the standard
- snorkel arrangements can only be provided for bedrooms. The maximum depth (1.5 x width) control applies to the secondary area within the room.¹¹⁹

Noting that windows are directly connected to several other standards, particularly daylight (see Section 5.3), the Committee received evidence that this BADS Standard and the Guidelines could still be improved in a number of ways, including:

- Providing for windows in bathrooms to support ventilation.¹²⁰
- Considering placement of windows and balconies in the context of main roads, diesel train routes and other sources of air pollution. The design response may include the use of 'winter balconies' and air monitoring/purifying systems within buildings or alternatively, introduce a new standard to consider air quality apartment design.¹²¹
- Requiring daylight modelling to be provided when certain specified separation distances are not achieved for both existing and proposed habitable room windows and including standards to address windows facing onto a covered or inset balcony.¹²²
- Introducing mandatory controls for a minimum separation distance between apartments and facing windows.¹²³
- The minimum depth requirement for snorkel windows should be wider than 1.2 metres for improved daylight, and improved useability options, such as desk space or storage.¹²⁴

¹¹⁷ Dr Andrew Martel, *Transcript of evidence*, pp. 40–41.

¹¹⁸ Department of Environment, *Apartment design guidelines for Victoria*, p. 120.

¹¹⁹ *Ibid.*, pp. 120–121.

¹²⁰ Darebin Appropriate Development Association, *Submission 8*, received 20 October 2021, p. 5.

¹²¹ Maribyrnong City Council, *Submission 22*, p. 9.

¹²² City of Yarra, *Submission 30*, pp. 3–4.

¹²³ City of Melbourne, *Submission 51*, pp. 8, 13.

¹²⁴ Manningham Council, *Submission 36*, p. 5.

The current NCC prescribes minimum window requirements for habitable rooms¹²⁵ (refer to Clause 3.8.4.2 outlined in Appendix B), as well as glazing and safety requirements. A window is defined in the NCC as either:

a roof light, glass panel, glass block or brick, glass louvre, glazed sash, glazed door, or other device which transmits natural light directly from outside a building to the room concerned when in the closed position.¹²⁶

Several submissions to the Inquiry specifically highlighted the need for openable windows in apartments. The NCC requires protection for openable windows in bedrooms of new residential buildings, including houses, apartments, and hotels, where the floor below the window is more than 2 metres above the surface beneath.¹²⁷ The submission from the Strata Community Association noted that there should be greater attention given to the health and safety of residents in relation to windows. It stated that programs in other jurisdictions, such as the NSW Department of Health's 'Kids Don't Fly' campaign, could be adapted in the Victorian context to enhance safety (particularly for families with children living in apartments).¹²⁸

FINDING 36: The introduction of the Better Apartments Design Standards D26 and B48 has significantly improved the design of new apartments across Victoria by requiring bedrooms with windows.

5.9 Aspect

Aspect is not considered as a specific standard in BADS, however, it is covered through standards relating to building separation, outlook, room depth, and windows.¹²⁹

AHURI told the Committee that prior to BADS being introduced in Victoria, many apartments were built as single-aspect apartments.¹³⁰ AHURI provided the Committee with a definition of aspect, explaining that single-aspect apartments have only one face of the dwelling on the external face of the building with access to outside.¹³¹ Dr Tom Alves advocated that apartments should ideally have at least two aspects to facilitate good ventilation and daylight access to all rooms.¹³² Maribyrnong City Council

¹²⁵ According to the NCC, a habitable room means 'a room used for normal domestic activities, and—includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room, home theatre and sunroom; but excludes a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes-drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods. See National Construction Code, sch 3.

¹²⁶ Ibid.

¹²⁷ Australian Building Codes Board, *Protection of openable windows: Advisory note*, 2020, p. 1.

¹²⁸ Strata Community Association, *Submission 52*, received 5 November 2021, p. 3.

¹²⁹ Department of Environment, *Apartment design guidelines for Victoria*.

¹³⁰ Dr Tom Alves, Head of Development, Australian Housing and Urban Research Institute, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 7.

¹³¹ Ibid.

¹³² Dr Tom Alves, *Submission 50*, p. 8.

also encouraged the provision of more multi-aspect dwellings and that this could be achieved through simplification of Standard D27 relating to natural ventilation.¹³³

It was also represented amongst submissions that apartments should have a northern aspect where possible, including to ensure greatest potential sunlight access to optimise thermal performance, liveability and resident comfort, and to reduce energy consumption.¹³⁴ Manningham Council highlighted the need for a greater number of multi-aspect apartments, and that limitations should be placed on the number of single southern-aspect apartments.¹³⁵ This view was shared by Moreland City Council who contended that the VPPs would benefit from guidance specific to single-aspect south-facing apartments.¹³⁶

Several submissions specifically highlighted the links between room depth and single-aspect apartments. Dr Tom Alves stated that aspects should be greater than the depth of the apartment, where only one aspect is present.¹³⁷ Moonee Valley City Council believed that improving standards to a preferred maximum depth of 8 metres for habitable rooms could assist as a means of discouraging single-aspect south-facing apartments, where possible.¹³⁸ The BADS say that single-aspect habitable rooms should not exceed a room depth of 2.5 times the ceiling height.¹³⁹

The OVGA explained to the Committee how a dual-aspect could be achieved through single-loaded corridors or corner apartments.¹⁴⁰ The OVGA cited the example of the Domain Park apartment building in South Yarra (4 kilometres from the Melbourne CBD), designed by Robin Boyd in 1962. Domain Park incorporates a single-loaded corridor and provides apartments effectively with at least two aspects with air in from one side of the building and out the other, which cannot occur with a double-loaded corridor.¹⁴¹ The OVGA advised that NSW encourage a maximum of eight apartments off one lift core in an effort to limit single-aspect apartments facing south.¹⁴²

At its site visits of 1 April 2022, the Committee attended the Hawke and King apartment development in West Melbourne. The Hawke and King apartments (see Figure 5.2 below) were designed by Six Degrees Architects and comprise a series of four buildings with single-loaded corridors facing inwards, providing dual-aspects in each dwelling.¹⁴³ The Committee found that the development, containing 74 apartments surrounding an

¹³³ Maribyrnong City Council, *Submission 22*, p. 8.

¹³⁴ Dr Tom Alves, *Submission 50*, p. 8; Manningham Council, *Submission 36*, p. 6.

¹³⁵ Manningham Council, *Submission 36*, p. 6.

¹³⁶ Moreland City Council, *Submission 39*, p. 12.

¹³⁷ Dr Tom Alves, *Submission 50*, p. 8.

¹³⁸ Moonee Valley City Council, *Submission 37*, p. 5.

¹³⁹ Department of Environment, *Apartment design guidelines for Victoria*, p. 117.

¹⁴⁰ Mr David Islip, *Transcript of evidence*, p. 42.

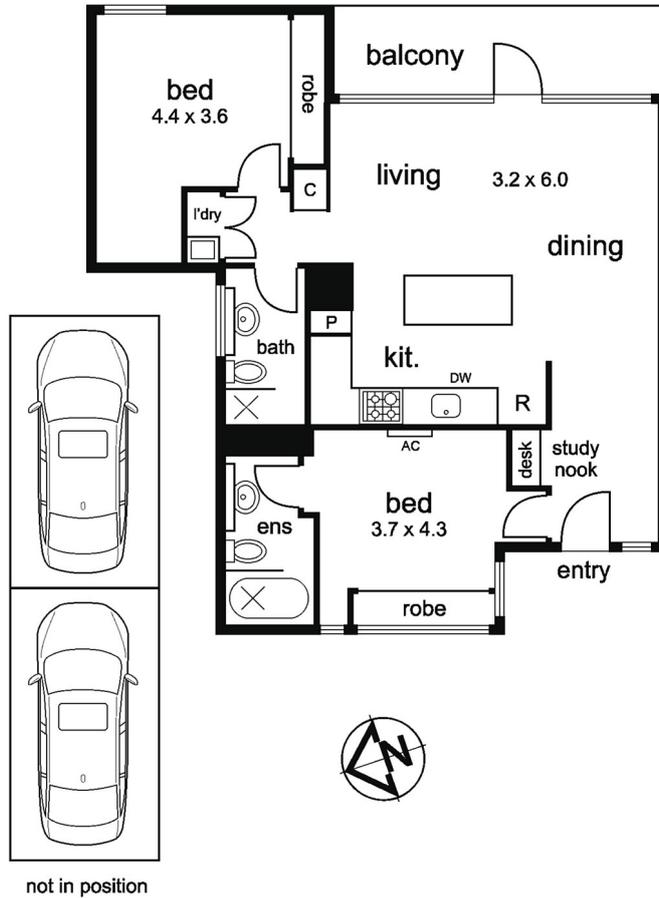
¹⁴¹ *Ibid.*

¹⁴² *Ibid.*, pp. 42–43.

¹⁴³ Department of Environment, *Apartment design guidelines for Victoria*, p. 23; Linda Cheng, 'Six Degrees Hawke and King apartments', *ArchitectureAU.com*, 3 March 2016, <<https://architectureau.com/articles/six-degrees-hawke-and-king-apartments>> accessed 2 June 2022.

internal courtyard, demonstrated how dwellings with more than a single-aspect could maximise access to daylight and increase a sense of community and liveability.

Figure 5.2 Hawke and King Apartments, West Melbourne



Note: The Hawke and King apartments, illustrated by this example floorplan, provide an example of a dual-aspect dwelling in a building with single-loaded corridors and internal courtyard, maximising access to natural light and ventilation.

Source: Nelson Alexander, 104/2 Hawke Street, West Melbourne VIC 3003, <<https://www.nelsonalexander.com.au/property/940824/1042-hawke-street-west-melbourne-vic-3003>> accessed 2 June 2022.

FINDING 37: There was broad consensus amongst stakeholders that apartments should be designed with more than one aspect to optimise sunlight access, liveability, and resident comfort and to reduce energy consumption. Aspect is not currently considered as a specific standard in *Better Apartments Design Standards*, however, it is covered somewhat through related standards.

RECOMMENDATION 9: The Department of Environment, Land, Water and Planning include guidance around aspect, including in relation to maximising sunlight access, liveability, and resident comfort, within the *Better Apartments Design Standards*.

5.10 Diversity of apartments

Diversity of apartments refers to a mixture of apartment sizes, number of bedrooms and layouts within an apartment building.

'Principle 8: Housing diversity and social interaction' of the NSW SEPP 65 *Design Quality Principles* outlines the following with relation to housing diversity and good design:

Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets.

Well designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix.

Good design involves practical and flexible features, including different types of communal spaces for a broad range of people and providing opportunities for social interaction among residents.¹⁴⁴

VPP 'Standard 16.01-1S Housing Supply' aims to 'facilitate well-located, integrated and diverse housing that meets community needs'.¹⁴⁵ However, there is no specific standard for diversity within apartment buildings in BADS or the Guidelines.

Maroondah City Council advocated for a prescribed threshold for housing diversity and suggested including a percentage of the development that should be one and three bedroom apartments.¹⁴⁶ It was the view of Monash City Council that a variety of apartment sizes within larger apartment developments should be required in order to provide diversity and flexibility for future households.¹⁴⁷ Dr Tom Alves stated that the provision of dwelling diversity at the local and regional scales would assist the domestic needs of the occupants.¹⁴⁸ To create more diversity within apartments, Manningham Council encouraged multi-level dwellings to enable the option of double height windows and mezzanines.¹⁴⁹

FINDING 38: There was broad consensus amongst stakeholders to suggest the need for diversity in apartment developments across Victoria, particularly larger apartments to accommodate families.

RECOMMENDATION 10: The Department of Environment, Land, Water and Planning develop guidelines around accommodating families in apartments with consideration to the Toronto *Growing Up: Planning for Children in New Vertical Communities Urban Design Guidelines*.

¹⁴⁴ State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development (2002 EPI 530), sch 1

¹⁴⁵ *Victoria Planning Provisions*, Standard 16.01-1S

¹⁴⁶ Maroondah City Council, *Submission 32*, p. 9.

¹⁴⁷ Monash City Council, *Submission 29*, p. 3.

¹⁴⁸ Dr Tom Alves, *Submission 50*, p. 7. See also Blackburn Village Residents Group, *Submission 46*, p. 11; Moonee Valley City Council, *Submission 37*, p. 4;

¹⁴⁹ Manningham Council, *Submission 36*, p. 7.

6 Improvements to building amenity and performance

This chapter outlines potential improvements to apartment buildings to enhance their performance, liveability and amenity. Building amenity and performance is contained under the *Better Apartments Design Standards* (BADS) and the *Apartment Design Guidelines for Victoria* (the Guidelines) through various provisions dealing with ‘siting and building arrangements’, and ‘building performance’.

6.1 Sustainability and environmentally sustainable design principles

This section outlines the incorporation of sustainability into development and design aspects of Victoria’s planning system, with a particular focus on apartment buildings. Environmental sustainability of apartment design was one of the most widely discussed aspects of the Inquiry.

6.1.1 State-wide approach

In 2020, the Department of Environment, Land, Water and Planning (DELWP) released the *Environmentally sustainable development of buildings and subdivisions: A roadmap for Victoria’s planning system* report (the Roadmap), which outlined a roadmap for the introduction of sustainable development planning policies and standards in areas such as recycling, the reduction of urban heat impacts, sustainable transport choices, the reduction of noise and air pollution, and improving energy efficiency in buildings.¹ Sustainable development policies ensure that Victoria is able to manage ‘increasing pressures on our natural resources, higher levels of population growth, and the effects of climate change’ without compromising the needs of future generations.²

A key aspect of this is the development of environmentally sustainable design (ESD) to guide the future of Victoria’s built environment. To ensure that sustainability is incorporated into the planning of developments, ESD ‘protects our environment, secures today’s living standards and future-proofs our community against rising energy, water and waste disposal costs’.³

ESD efficiency principles already form part of planning policies and standards of apartment design. For example, one of the objectives of the *Building Act 1993* is ‘to

1 Department of Environment, Land, Water and Planning, *Environmentally sustainable development of buildings and subdivisions: A roadmap for Victoria’s planning system*, 2020, p. 4.

2 Ibid., p. 5.

3 Inner Melbourne Action Plan, *SDAPP explained: Building design for a sustainable future*, 2015, p. 1.

facilitate the construction of environmentally and energy efficient buildings'.⁴ Further, BADS contains various ESD-related standards on issues such as energy efficiency, waste and recycling, noise impacts, and integrated water and stormwater management.⁵ The standard on energy efficiency in particular is designed to address the effects of climate change:

Apartments that are energy efficient through passive design provide good thermal comfort and daylight access and reduce energy costs. With the ongoing effects of climate change ensuring the thermal performance of apartments over summer will become increasingly important. Reducing energy costs is important for housing affordability and reducing the effects of fossil fuel consumption.⁶

At a local government level, local councils have developed a coordinated approach to adopt clauses in their planning schemes to encourage ESD and energy efficiency in new buildings.⁷ Under the auspices of the Municipal Association of Victoria (MAV), the Council Alliance for a Sustainable Built Environment (CASBE) is a collaborative alliance of 40 Victorian councils working together to create a sustainable built environment. Through CASBE, important tools for assessing the sustainability of development proposals at the planning stage have been implemented, particularly the *Built Environment Sustainability Scorecard* (BESS) and the *Sustainable Design Assessment in the Planning Process* (SDAPP).⁸ In its submission, CASBE also noted its current research work 'that aims to elevate Environmentally Sustainable Development ... targets for new development'.⁹

The Roadmap contains a proposal to update the Victoria Planning Provisions (VPPs) 'to comprehensively embed ESD into planning and decision making for new buildings across residential, commercial and industrial land uses'.¹⁰ It highlights that BADS has incorporated some level of ESD through standards such as energy efficiency, but acknowledges that further work is required.

This sentiment was echoed by many stakeholders, who considered that ESD principles should be comprehensively embedded throughout BADS and more broadly in the VPPs.¹¹ For example, Frankston City Council considered that '[a]n all of Government approach needs to be taken in relation to the implementation of ESD in order to reduce

⁴ *Building Act 1993* (Vic) s 4(1)(f).

⁵ Department of Environment, Land, Water and Planning, *Environmentally sustainable development of buildings and subdivisions*, p. 11.

⁶ Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, 2021, p. 102.

⁷ Municipal Association of Victoria, *Submission 27*, received 29 October 2021, p. 11.

⁸ Council Alliance for a Sustainable Built Environment, *Submission 33*, received 29 October 2021, pp. 1–2.

⁹ *Ibid.*, p. 5. See also Council Alliance for a Sustainable Built Environment, *Elevating ESD targets planning policy amendment*, <<https://www.casbe.org.au/elevating-esd-targets>> accessed 27 April 2022.

¹⁰ Department of Environment, Land, Water and Planning, *Environmentally sustainable development of buildings and subdivisions*, p. 12.

¹¹ See for example, City of Greater Dandenong, *Submission 10*, received 22 October 2021, p. 2; Municipal Association of Victoria, *Submission 27*, p. 11; Maroondah City Council, *Submission 32*, received 29 October 2021, p. 7; Council Alliance for a Sustainable Built Environment, *Submission 33*, p. 5; Moreland City Council, *Submission 39*, received 30 October 2021, pp. 9–10; Glen Eira City Council, *Submission 44*, received 31 October 2021, p. 2; Mornington Peninsula Shire Council, *Submission 55*, received 12 November 2021, pp. 5–6.

the ongoing running costs of housing'.¹² Further, the Moreland City Council told the Committee during public hearings that ESD policies require strengthening across the board:

the crux of the matter is that we think that there need to be control mechanisms within the Victoria planning provisions that apply not just to apartments but to all development, and they need to be much more comprehensive and ambitious than the current requirements in clause 58 are.¹³

The Committee agrees that the Roadmap provides a strong reference point for the consideration of environmental development and design comprehensively in all planning policies. While BADS does incorporate ESD in some aspects, there is scope to strengthen and improve consideration of these design principles throughout the BADS.

FINDING 39: There is scope to incorporate the Environmentally Sustainable Development targets in the *Better Apartments Design Standards* to strengthen sustainability provisions.

RECOMMENDATION 11: The Department of Environment, Land, Water and Planning update the *Better Apartments Design Standards* and *Victoria Planning Provisions* to implement a state-wide requirement for environmentally sustainable design, as outlined in the *Environmentally sustainable development of buildings and subdivisions: A roadmap for Victoria's planning system*.

6.1.2 Net-zero emissions target

Under the *Climate Change Act 2017*, Victoria is aiming to reduce greenhouse gas emissions to net-zero by 2050, with interim reduction targets of 28 to 33% below 2005 levels by the end of 2025, and 45 to 50% below 2005 levels by the end of 2030.¹⁴

DELWP has outlined its commitment to net-zero emissions in its *Corporate Plan 2021-2025*. This includes implementing legislation and policies that work towards net-zero carbon new homes¹⁵ and implementing the Future Homes Project.¹⁶ The Future Homes Project aims to 'produce better apartment designs that support the building of apartments that become world leaders in design, sustainability and liveability'.¹⁷

¹² Frankston City Council, *Submission 18*, received 28 October 2021, p. 3.

¹³ Ms Karen Bayly, Principal Strategic Planner, Moreland City Council, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, p. 16.

¹⁴ Department of Environment, Land, Water and Planning, *Victoria's greenhouse gas emissions and targets: Understanding Victoria's contribution to climate change, and the ambitious targets guiding us to net-zero emissions by 2050*, 2022, <<https://www.climatechange.vic.gov.au/victorias-greenhouse-gas-emissions-and-targets>> accessed 28 April 2022.

¹⁵ Department of Environment, Land, Water and Planning, *Corporate plan 2021-2025*, 2021, p. 44.

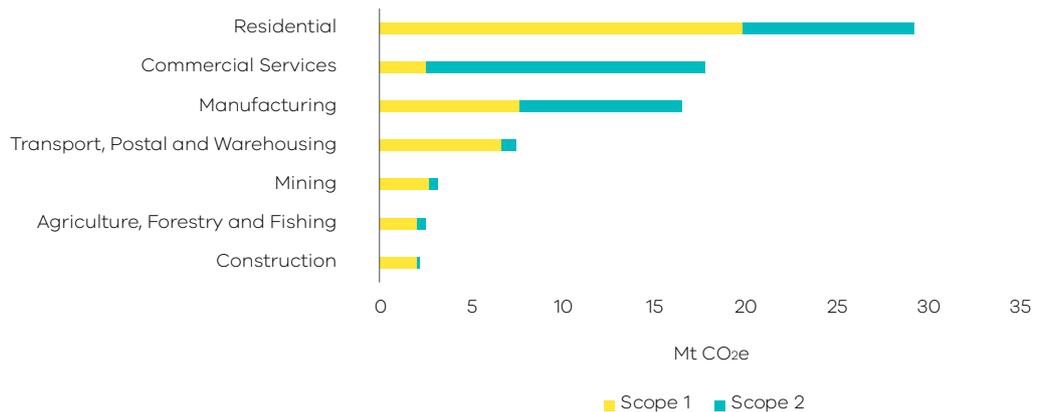
¹⁶ *Ibid.*, p. 54.

¹⁷ State Government of Victoria, *Future Homes: Melbourne's next apartments*, 2022, <<https://www.vic.gov.au/future-homes>> accessed 1 June 2022.

The *Victorian Greenhouse Gas Emissions Report 2019* shows that the residential sector is responsible for the largest share of greenhouse gas emissions in Victoria,¹⁸ so reducing emissions in the residential sector—including new apartment buildings—would assist with meeting Victoria’s greenhouse gas reduction targets.

Figure 6.1 illustrates greenhouse gas emissions by sector in Victoria in 2019.

Figure 6.1 Greenhouse gas emissions by sector



Source: Department of Environment, Land, Water and Planning, *Victorian greenhouse gas emissions report 2019*, 2021, p. 52.

Stakeholders were supportive of efforts to achieve net-zero emissions within apartment buildings and suggested that BADS could be strengthened in this regard.¹⁹ For example, the Australian Institute of Architects (AIA) suggested that BADS could be amended to reflect a target for net-zero, and guidance for sustainable design and construction in areas such as materials, impact of buildings in its local context, and supply chain responsibility could be included.²⁰

Some stakeholders also raised that this exercise should include consideration of ‘decarbonising’ older apartment buildings, or making them more energy efficient,²¹ and a suggestion that incentives could be provided to owners to encourage them to upgrade.²²

On a related issue, some stakeholders considered that new apartments should be 100% electric with no gas heating or cooking, as an important step to achieving net-zero

¹⁸ Department of Environment, Land, Water and Planning, *Victorian greenhouse gas emissions report 2019*, 2021, p. 52. Note that the energy sector is excluded from these figures as the emissions from the energy sector are allocated to the other sectors that consume the electricity.

¹⁹ See for example, Knox City Council, *Submission 24*, received 29 October 2021, p. 2; Municipal Association of Victoria, *Submission 27*, p. 11; Council Alliance for a Sustainable Built Environment, *Submission 33*, p. 5; Moonee Valley City Council, *Submission 37*, received 29 October 2021, p. 5; City of Melbourne, *Submission 51*, received 1 November 2021, p. 6; Australian Institute of Architects, *Submission 54*, received 12 November 2021, pp. 16–17.

²⁰ Australian Institute of Architects, *Submission 54*, p. 17.

²¹ Project HOME, *Submission 43*, received 31 October 2021, p. 14; Australian Institute of Architects, *Submission 54*, p. 17.

²² Mr James Legge, Director, Six Degrees Architects, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 33.

emissions.²³ On the other hand, while supportive of electrification of apartments, Engineers Australia said that it ‘raises the question whether building systems can support the additional electrical load’.²⁴ The Victorian Government aims to release a Gas Substitution Roadmap in the first half of 2022.²⁵ The Committee looks forward to the release of the Roadmap and considers that its findings should be taken into consideration for future updates to BADS.

The Committee supports efforts to improve apartment design to lower emissions. To this end, the Committee heard that CASBE is currently coordinating research to elevate ESD targets including targets for zero carbon development, with a particular focus on apartments.²⁶

FINDING 40: The *Better Apartments Design Standards* could be strengthened through the addition of lower emissions targets.

RECOMMENDATION 12: The Department of Environment, Land, Water and Planning strengthen the *Better Apartments Design Standards* to reflect Victorian Government targets for net-zero emissions.

6.2 Building accessibility

While accessibility of individual apartments is considered in Chapter 5, this section considers the broader accessibility of apartment buildings.

In 2018, 17.7% of Australians had a disability, and the prevalence increased to 49.6% for people aged over 65.²⁷ The Committee heard that, in this context, building accessibility is an important aspect of ensuring liveability of apartments. For example, the Australian Housing and Urban Research Institute (AHURI) particularly noted the accessibility needs of older people, including those who may downsize into an apartment.²⁸ At public hearings, the Darebin Appropriate Development Association (DADA) and Whitehorse Ratepayers and Residents Association told the Committee that lifts are a particularly concerning issue, as lifts that are too small can mean people in wheelchairs

²³ Ms Jane Brownrigg, *Submission 2*, received 24 September 2021, p. 2; Knox City Council, *Submission 24*, p. 2; Moonee Valley City Council, *Submission 37*, p. 5.

²⁴ Engineers Australia, *Submission 35*, received 29 October 2021, p. 11.

²⁵ Department of Environment, Land, Water and Planning, *Help us build Victoria's Gas Substitution Roadmap*, <<https://engage.vic.gov.au/help-us-build-victorias-gas-substitution-roadmap>> accessed 21 April 2022. At the time of writing this report the Gas Substitution Roadmap has not yet been released.

²⁶ Council Alliance for a Sustainable Built Environment, *Submission 33*, p. 5.

²⁷ Australian Bureau of Statistics, *Disability, ageing and carers, Australia: summary of findings*, 2019, <<https://www.abs.gov.au/statistics/health/disability/disability-ageing-and-carers-australia-summary-findings/latest-release>> accessed 26 April.

²⁸ Australian Housing and Urban Research Institute, *Submission 49*, received 31 October 2021, p. 9.

or on walkers cannot turn around inside the lift, and lift buttons that are too high can be hard or impossible for some people to reach.²⁹

The AIA considered that measures to improve building accessibility, such as wide corridors, can also assist groups such as parents of young children pushing prams, or others living with chronic health conditions.³⁰ DADA also considered that storage spaces outside of apartments but within buildings (such as waste or private storage) need to be wheelchair accessible.³¹

Given that accessibility is largely considered in relation to the individual dwelling, rather than the building within BADS, the Committee heard that BADS provides limited guidance in relation to key building accessibility issues. The City of Greater Dandenong noted that there is no requirement to have an accessible path from the building entry or car park to the door of an individual apartment.³² Moonee Valley City Council recommended a more meaningful approach to equitable access to the building:

Establish guidance to accommodate equitable and DDA [*Disability Discrimination Act 1992*] compliant pedestrian paths and entrances to buildings, including materiality and minimum clearances, preferably without the use of access lifts; which are often subject to functional limitations and maintenance issues.³³

The Committee understands that some change in this area is expected at the Commonwealth level under the National Construction Code (NCC), with a revised standard to ensure basic accessibility standards in new homes and apartments being implemented:

This would require new homes to include features such as step free entry, step free showers, ground level accessible toilets, structural reinforcements to support grab rail installation in bathrooms and for doorways, and transitional spaces to allow ease of movement.³⁴

It is understood that this revised standard is expected to be adopted in September 2022.³⁵ In explaining these developments, DELWP told the Committee of the fundamental change this standard will make to improve the quality of life of people with disability going forward:

So these are really important, fundamental features that will be built in and (a) just make it easier for people to, as you say, age in place and for people of various different levels

²⁹ Ms Maria Poletti, President, Darebin Appropriate Development Association, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 54; Ms Tanya Tescher, President, Whitehorse Ratepayers and Residents Association, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 54.

³⁰ Australian Institute of Architects, *Submission 54*, p. 13.

³¹ Darebin Appropriate Development Association, *Submission 8*, received 20 October 2021, p. 9.

³² City of Greater Dandenong, *Submission 10*, p. 3.

³³ Moonee Valley City Council, *Submission 37*, p. 3.

³⁴ The Hon Richard Wynne MP, *Victoria pushing for accessible housing standards*, media release, Victorian Government, 30 April 2021.

³⁵ Australian Building Codes Board, *NCC 2022 preview and adoption dates, 2022*, <<https://ncc.abcb.gov.au/news/2022/ncc-2022-preview-and-adoption-dates>> accessed 26 April 2022.

of physical ability, but also enable the upgrading of those facilities later on. Being able to install grab rails into a bathroom without having to do reinforcement work and rip off plaster is a really fundamental thing.³⁶

DELWP further advised that the changes will mean that 50% of housing stock across Victoria will be accessible by 2050, with basic accessibility features in place.³⁷ The Committee looks forward to the implementation of the NCC standard and considers that it will improve the accessibility of new apartments for people with a disability.

FINDING 41: Expected changes to the National Construction Code in 2022 will improve accessibility of new apartment buildings for people with a disability.

6.3 Building setback and separation

Building setback generally refers to the distance between a building and the street or property boundary,³⁸ while building separation is the distance between two buildings.³⁹ It is noted in the Guidelines for BADS that building setbacks contribute to the character of an area, and provide for key amenity considerations including 'daylight, sunlight, visual privacy, outlook and ventilation to buildings, and may provide space for landscaping'.⁴⁰ The Guidelines acknowledge that setbacks will vary from site to site, with issues such as surrounding buildings, patterns of street setbacks and existing vegetation to be taken into consideration when determining appropriate setbacks for a development. Local government planning provisions may also have minimum setback requirements that need to be followed.⁴¹

BADS does not currently specify quantified distances that are required for building setbacks. By contrast, the New South Wales (NSW) *Apartment Design Guide* sets minimum distances for building separation in metres and acknowledges that the minimum distances may need to be increased to allow for issues such as adequate sunlight or amenity.⁴² Other jurisdictions that also include setback metrics include Western Australia and Singapore.⁴³

There was support among Victorian local councils for minimum building separation distances to be specified within BADS, with many considering that the lack of specific

³⁶ Dr Trevor Pisciotta, Executive Director, Building, Department of Environment, Land, Water and Planning, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 58.

³⁷ *Ibid.*, p. 59.

³⁸ Department of Health and Human Services, *Setbacks, height and privacy: Dunlop Avenue, Ascot Vale*, 2018, p. 2.

³⁹ NSW Department of Planning and Environment, *Apartment design guide: Tools for improving the design of residential apartment development*, 2015, p. 36.

⁴⁰ Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, p. 11.

⁴¹ *Ibid.*, p. 14.

⁴² NSW Department of Planning and Environment, *Apartment design guide*, p. 37.

⁴³ Mr David Islip, Principal Adviser, Urban Design and Architecture, Office of the Victorian Government Architect, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 40.

guidance makes it harder for them to achieve sufficient outcomes.⁴⁴ For example, Darebin City Council argued that mandatory standards are ‘overdue’ in BADS ‘as lack of adequate separation is having a huge impact on the amenity and quality of apartment living’.⁴⁵ The Office of the Victorian Government Architect (OVGA) also spoke to the importance of building setback in providing access to daylight, and the impact of having metrics in place for this standard:

It is critical that the standard and metric for building separation is understood to be important, given the interdependencies of sunlight, daylight, privacy, outlook, acoustics and cross-ventilation. An apartment’s frontage is its principal and frequently only source of daylight and natural ventilation, especially if you are a single-aspect apartment. The amount of space that there is beyond the apartment frontage and the extent open to the sky will affect daylight and sunlight levels within the dwelling but also the quality of outlook from inside. Any metric would need to be tested to be ensure adequate daylight, but we did do that exercise as part of the development of the standards.⁴⁶

Urban Design Forum Australia (UDFA) noted that time and money is wasted if individual councils each must set their own separation standards in local planning schemes, rather than it being a state-wide requirement.⁴⁷

FINDING 42: Building setback is an important consideration in apartment design standards and could be further specified within the *Better Apartments Design Standards*.

RECOMMENDATION 13: The Department of Environment, Land, Water and Planning update the *Better Apartments Design Standards* to include specific metric guidance for building setbacks.

6.4 Communal open space

BADS contains a standard for the provision of communal open space to improve social interaction, recreation and amenity needs of residents. It can include indoor or outdoor communal space. Every development of ten or more dwellings should provide a minimum area of 30 square metres of landscaped communal outdoor open space. Developments over 13 dwellings need to provide additional communal open space; however, this additional space can be indoors or outdoors.⁴⁸ Areas of communal

⁴⁴ See, for example, Ms Lavanya Arulanandam, Senior Urban Designer, City of Melbourne, Public hearing, Melbourne, 15 November 2022, *Transcript of evidence*, p. 18; Mr Munir Vahanvati, City Designer, City Development, Darebin City Council, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, p. 21; Moreland City Council, *Submission 39*, p. 11; Darebin City Council, *Submission 40*, received 31 October 2021, pp. 6–7; Maroondah City Council, *Submission 32*, p. 4.

⁴⁵ Darebin City Council, *Submission 40*, p. 10.

⁴⁶ Mr David Islip, *Transcript of evidence*, pp. 39–40.

⁴⁷ Urban Design Forum Australia, *Submission 53*, received 7 November 2021, p. 7.

⁴⁸ Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, p. 21.

open space should be accessible to all residents and be a useable size, shape and dimension.⁴⁹

Outdoor communal open space can be provided in multiple places in the apartment development and can be located on rooftops or podiums as well as at ground level. Where outdoor communal space is provided in multiple locations, a primary communal open space should be a minimum of 50% of the total consolidated area.⁵⁰ Outdoor communal open space does not include common areas such as entry lobbies, outdoor pathways, car parking, bike storage or light courts.⁵¹ Communal open space was seen as important for apartment liveability, for example, the AIA noted that it can foster community relationships within buildings:

apartment buildings should be designed to foster community through things such as incidental spaces that allow interaction between neighbours. These could be a range of things such as rooftop gardens, open walkways, landscaped entries, shared laundries, shared bicycle facilities or workshops or common rooms—so just the possibility for people to have incidental interaction.⁵²

Relatedly, BADS contains requirements to ensure there is solar access into communal open space:

The communal outdoor open space should be located on the north side of a building, if appropriate.

At least 50 per cent or 125 square metres, whichever is the lesser, of the primary communal outdoor open space should receive a minimum of two hours of sunlight between 9am and 3pm on 21 June.⁵³

The Guidelines note that the two hours of sunlight does not need to be continuous. Communal open spaces should be located in areas with minimal overshadowing.⁵⁴

6.4.1 Definition and guidance

Moonee Valley City Council suggested that guidance on the functional design of communal spaces could be improved ‘to ensure they are practical, purposeful, and genuinely facilitate communal use’.⁵⁵ To this end, the Committee notes that while indoor communal open space can contribute to requirements for the total communal open space for developments, there is little guidance about what constitutes indoor communal open space, or how such spaces should be designed. Monash City Council suggested that communal open space should be provided in different forms to

⁴⁹ Ibid., p. 20.

⁵⁰ Ibid., p. 31.

⁵¹ Ibid., p. 22.

⁵² Mr James Legge, *Transcript of evidence*, p. 27.

⁵³ *Victoria Planning Provisions* cl 55.07-3, 58.03-3.

⁵⁴ Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, p. 31.

⁵⁵ Moonee Valley City Council, *Submission 37*, p. 5.

accommodate various needs of residents.⁵⁶ The City of Melbourne believed that strengthened standards are required for issues such as open space quality, usability, maintenance, surveillance and provisions such as communal bathrooms.⁵⁷

Entry and circulation also act as a key aspect of communal space. Some stakeholders considered that BADS should contain standards for larger lobbies or communal spaces near the entrance.⁵⁸ For example, Maroondah City Council suggested that indoor communal space could be mandated at the building entry and lobby to ‘improve the interface with the public realm’.⁵⁹ Delivery of parcels and food was seen as another area that needed improvement, with suggestions of dedicated secure parcel delivery areas.⁶⁰

At public hearings, the City of Yarra argued that the interplay between indoor and outdoor communal space needs improved consideration:

communal open space now may be provided indoors as well as outdoors, which leaves quite a concern from an amenities perspective if in these apartment developments you are not having sufficient open space, noting that many of them only have quite small balconies. So that is quite a concern for amenity from an open space perspective. We feel that there should be both internal and also communal areas, noting that it is an improved amenity outcome if you have larger areas for people to come together, meet their neighbours et cetera.⁶¹

In terms of sizing, Hobsons Bay City Council considered that a sliding scale minimum area requirement may be more appropriate than the current standard which remains the same even for larger developments.⁶² The OVGGA noted that NSW guidance provides that communal open space has a minimum area that is 25% of the site.⁶³ On a related issue, the councils of Maroondah and Monash suggested that standards for communal open space could be broadened to apply to smaller apartment developments.⁶⁴

In terms of solar access, noting that variations to this standard are often sought by developers, the City of Melbourne argued for stronger requirements for the siting and orientation of communal outdoor open space ‘to avoid excessive overshadowing and inhabitable wind conditions’.⁶⁵

⁵⁶ Monash City Council, *Submission 29*, received 29 October 2021, p. 3.

⁵⁷ City of Melbourne, *Submission 51*, p. 6.

⁵⁸ Maroondah City Council, *Submission 32*, p. 5; Manningham Council, *Submission 36, attachment 1*, received 29 October 2021, p. 7.

⁵⁹ Maroondah City Council, *Submission 32*, p. 5.

⁶⁰ Ms Kirsty Ellem, *Submission 13*, received 26 October 2021, p. 2; Moreland City Council, *Submission 39*, p. 12; City of Greater Dandenong, *Submission 10*, p. 3; Hobsons Bay City Council, *Submission 31*, received 29 October 2021, p. 5.

⁶¹ Ms Amy Hodgen, Senior Coordinator, Statutory Planning, City of Yarra, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, p. 14.

⁶² Hobsons Bay City Council, *Submission 31*, p. 3.

⁶³ Office of the Victorian Government Architect, *Submission 16*, received 27 October 2021, p. 2.

⁶⁴ Monash City Council, *Submission 29*, p. 3; Maroondah City Council, *Submission 32*, p. 4.

⁶⁵ City of Melbourne, *Submission 51*, p. 7.

Some stakeholders also discussed flexibility where developments are located near public space such as parks.⁶⁶ For example, Manningham City Council suggested that more flexibility could be built in so that if a development is near public space such as parks, the requirements for communal public space can be lessened.⁶⁷

The Committee notes that well-designed communal space is important and can lead to positive outcomes for residents of apartments. It also considers that further guidance on communal spaces within BADS would be beneficial, particularly around enhanced design guidance, indoor communal space, and the applicability of requirements to smaller apartment developments.

FINDING 43: Well-designed open communal space is a key feature of community life within apartment buildings and can positively impact residents' health and wellbeing.

RECOMMENDATION 14: The Department of Environment, Land, Water and Planning update the *Better Apartments Design Standards* to include enhanced guidance on communal open spaces, including reviewing examples such as London and Toronto.

Corridors

Corridors are considered in BADS in the context of building entry and circulation, and should include at least one source of natural light and ventilation, avoid obstruction from building services, and maintain clear sight lines.⁶⁸

Some stakeholders advocated for inclusion of prescriptive width and/or length requirements for corridors, which are not currently provided for in BADS.⁶⁹ For example, Manningham Council suggested maximum distances would avoid the issue of very long corridors with only windows at the end.⁷⁰ Hobsons Bay City Council also considered that more prescriptive standards are required to improve amenity and allow for ease of moving furniture without damaging walls, with current concerning design features of corridors noted:

Often they are excessively long with little or no articulation or visual interest, are of an insufficient width and lack access to natural light and ventilation. Consideration should be given to introducing standards which address such issues.⁷¹

⁶⁶ See for example Name withheld, *Submission 21*, received 28 October 2021, p. 3; Maroondah City Council, *Submission 32*, p. 5; Manningham Council, *Submission 36*, p. 1.

⁶⁷ Manningham Council, *Submission 36*, p. 1.

⁶⁸ Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, p. 91.

⁶⁹ City of Yarra, *Submission 30*, received 29 October 2021, p. 3; Manningham Council, *Submission 36*, p. 2; Moreland City Council, *Submission 39*, p. 12; Hobsons Bay City Council, *Submission 31*, p. 4; Australian Institute of Architects, *Submission 54*, p. 12.

⁷⁰ Manningham Council, *Submission 36*, p. 2.

⁷¹ Hobsons Bay City Council, *Submission 31*, p. 4.

FINDING 44: Further consideration of corridor requirements would likely enhance building amenity and increase building accessibility for many residents, including people with a disability and parents with young children.

RECOMMENDATION 15: The Department of Environment, Land, Water and Planning update the *Better Apartments Design Standards* to provide improved guidance on corridors as communal spaces within apartment buildings.

Rooftop gardens

Rooftop gardens are included in BADS as a type of communal open space.⁷² They were generally seen by stakeholders as a positive addition to apartment buildings.⁷³ For example, an individual submission considered they can ‘allow for gardens, social gathering, and access to sunlight for those tenants with small or south-facing balconies’.⁷⁴ Other identified benefits of rooftop gardens included reduction of summer temperatures⁷⁵ and more privacy than in gardens at street level.⁷⁶

While the ability for rooftop gardens to increase socialisation between residents was noted, some stakeholders cautioned that rooftop gardens could be underutilised and did not necessarily improve socialisation.⁷⁷

Stakeholders considered that additional guidance on rooftop communal space may help to ensure such spaces are useable and incorporate good design aspects. This included on issues such as drainage of surface water,⁷⁸ and potential to cause amenity impacts to neighbouring sites due to visual bulk and height.⁷⁹ Maroondah City Council also noted the need for specific guidance on rooftop gardens, stating that they ‘require specifically engineered design’ that is incorporated early in the design process.⁸⁰

FINDING 45: Rooftop gardens and similar types of communal spaces are important to improve liveability of apartment buildings and strengthening guidance in this area would be beneficial.

⁷² Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, p. 24.

⁷³ See, for example, Blackburn Village Residents Group, *Submission 46*, received 31 October 2021, p. 10; Darebin City Council, *Submission 40*, p. 11.

⁷⁴ Ms Jane Westney, *Submission 5*, received 12 October 2021, p. 2.

⁷⁵ See, for example, Municipal Association of Victoria, *Submission 27*, p. 11.

⁷⁶ Maroondah City Council, *Submission 32*, p. 5.

⁷⁷ See, for example, Australian Housing and Urban Research Institute, *Submission 49*, p. 7; Urban Design Forum Australia, *Submission 53*, p. 9.

⁷⁸ Australian Institute of Architects, *Submission 54*, p. 15.

⁷⁹ Manningham Council, *Submission 36, attachment 1*, p. 3.

⁸⁰ Maroondah City Council, *Submission 32*, p. 6.

RECOMMENDATION 16: The Department of Environment, Land, Water and Planning update the *Better Apartments Design Standards* to provide improved guidance on rooftop gardens as communal spaces.

6.5 Transport and vehicles

This section addresses a number of issues raised during the course of the Inquiry around vehicles and transport. Primarily, the Committee examined car parking and electric vehicles (EVs).

6.5.1 Car parking

Car parking can have a substantial impact on building form, streetscape amenity and the cost of apartment developments, and should be a key consideration in the apartment design process.⁸¹

Car parking fostered significant attention throughout the course of the Inquiry, with often disparate attitudes towards policy options. Evidence presented to the Committee generally either proposed an increase or a reduction to parking infrastructure in apartment developments.

Infrastructure Victoria's (IV) *30-Year Strategy Engagement Report* also highlights the often-conflicting views around car parking:

For some, density done well is an opportunity to prepare for a future which is less car dependent and will require less car parking than is currently provided. For others, providing the current level of car parking, or increasing it to ensure the car parking needs of future residents are met, is important. Many participants could not conceive of a future with fewer cars, while others talked about the need for car dependence to be decreased through incentives and the removal of parking.⁸²

The *Apartment Design Guidelines* highlight that off-street on-site parking provides for greater accessibility and enables loading/unloading and waste collection to occur away from street frontages.⁸³

The Darebin City Council argued that apartment developments should provide the parking infrastructure necessary for residents. It highlighted that there are significant downsides with using the streetscape for parking, while acknowledging that the amount of parking required depends on location and proximity to public transport.⁸⁴

⁸¹ Department of Environment, Land, Water and Planning, *Better apartments: A discussion paper*, Melbourne, 2015, p. 26.

⁸² Infrastructure Victoria, *Infrastructure Victoria 30-year strategy engagement report (stage one and two)*, 2020, pp. 4–5.

⁸³ Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, p. 77.

⁸⁴ Ms Rachel Ollivier, General Manager, City Sustainability and Strategy, Darebin City Council, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, p. 20.

Other stakeholders agreed that if factors such as access to public transport or shared transport were met, car parking could be reduced or eliminated altogether.⁸⁵

The Committee agrees that for reduced parking arrangements to work effectively, they need to be linked with improved public and active transport accessibility.⁸⁶ DELWP's *Better Apartments: A discussion paper* argued that:

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.⁸⁷

The Committee notes that under the updated BADS there is no requirement for a minimum number of car spaces, or for a set ratio of car spaces to apartments. However, car parking is covered under Clause 52.06 of the VPPs, which require a minimum number of car spaces per dwelling, but also allow for that number to be reduced if factors such as proximity to public transport are met.⁸⁸

FINDING 46: Current regulatory arrangements around parking for apartments are sufficient. Apartments located in or near the Melbourne Central Business District, or within close proximity to employment or public transport infrastructure, may require little or no parking compared to sites not close to similar amenities.

6.5.2 Electric vehicles

The emergence and spreading popularity of EVs, along with associated infrastructure needs, was highlighted in a number of submissions made to the Committee.

EVs are becoming more common in Victoria, with registrations tripling between June 2018 and June 2021.⁸⁹ Given the growing ownership of EVs, it is likely that more people living in apartments will desire electric vehicle charging points either now or in the future, as it is anticipated charging at home will be the most convenient charging method.⁹⁰

The Committee notes, however, that cost considerations need to be factored into the potential development of EV charging infrastructure. Notably, *Victoria's Zero Emissions Vehicle Roadmap* states that:

⁸⁵ See, for example, Dr Tom Alves, Head of Development, Australian Housing and Urban Research Institute, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 8; Ms Karen Bayly, *Transcript of evidence*, pp. 19–20.

⁸⁶ Infrastructure Victoria, *Infrastructure Victoria 30-year strategy engagement report (stage one and two)*, p. 33.

⁸⁷ Department of Environment, Land, Water and Planning, *Better apartments: A discussion paper*, p. 26.

⁸⁸ *Victoria Planning Provisions* cl 52.06.

⁸⁹ Henrietta Cook, 'Petrol price surge drives Victoria's electric vehicle boom', *The Age*, 19 March 2022, <<https://www.theage.com.au/national/victoria/petrol-price-surge-drives-victoria-s-electric-vehicle-boom-20220318-p5a5rm.html>> accessed 6 April 2022.

⁹⁰ Knox City Council, *Submission 24*, p. 2.

Installation of private charging points within multi-unit dwellings, particularly in apartment carparks, can be a costly and complicated process for residents if the infrastructure is retrofitted after the building has been developed.⁹¹

Notwithstanding, throughout the Inquiry there was significant support for more EV charging points to be made available in apartment developments. Stakeholders recommended an investigation of what the requirement for providing EV charging should be,⁹² or making it compulsory for new car spaces to support charging in the future.⁹³

Knox City Council argued that car spaces in new apartment developments need to be ready to support EV charging in the future.⁹⁴ Maribyrnong City Council further noted that improvements need to be made on car parking and future needs for EV charging points.⁹⁵

Victoria's Zero Emissions Vehicle Roadmap states that the Victorian Government is looking at ways to increase EV vehicle charging in existing apartment buildings and is 'developing an online guide for apartment owners and body corporate committees to assist them in identifying and assessing options to enable EV charging in resident carparks'.⁹⁶

While the Committee supports the principles of this work, it notes that BADS does not currently provide for future transport needs, such as EV charging infrastructure. The Committee considers that future apartment buildings should enable EV charging and that this could be a requirement in the BADS. If EV chargers are not included in the initial build, options for infrastructure could be provided so that it is simple to install EV chargers at a later date.

However, the Committee does note concerns around the forecast increase of EV uptake. For example, Engineers Australia highlighted that further investigations need to be conducted into the capacity of apartment buildings to handle high levels of electrical loading, due to projected uptake of EV ownership, along with the associated fire safety risk in indoor carparks.⁹⁷

FINDING 47: The *Better Apartments Design Standards* do not currently provide for future transport needs, such as electric vehicle charging infrastructure.

⁹¹ Department of Environment, Land, Water and Planning, *Victoria's zero emissions vehicle roadmap*, 2021, p. 33.

⁹² See, for example, Frankston City Council, *Submission 18*, p. 3; Moreland City Council, *Submission 39*, p. 10; Maroondah City Council, *Submission 32*, p. 10.

⁹³ See, for example, Maribyrnong City Council, *Submission 22*, received 29 October 2021, p. 6; Knox City Council, *Submission 24*, p. 2; Moonee Valley City Council, *Submission 37*, p. 5.

⁹⁴ Knox City Council, *Submission 24*, p. 2.

⁹⁵ Maribyrnong City Council, *Submission 22*, p. 3.

⁹⁶ Department of Environment, Land, Water and Planning, *Victoria's zero emissions vehicle roadmap*, p. 63.

⁹⁷ Engineers Australia, *Submission 35*, p. 6.

RECOMMENDATION 17: The Department of Environment, Land, Water and Planning update the *Better Apartment Design Standards* to require the provision of electric vehicle charging infrastructure.

6.6 Landscaping

Landscaping can provide a number of benefits for both apartment residents and the broader community, including urban heat mitigation,⁹⁸ improved air quality,⁹⁹ better external amenity,¹⁰⁰ habitat for wildlife,¹⁰¹ and private space for apartment residents.¹⁰²

Canopy trees were seen as particularly important for urban heat mitigation,¹⁰³ but stakeholders felt that the Guidelines were not necessarily sufficient to support canopy trees as the minimum soil depths may not be enough to support the growth of large trees.¹⁰⁴ The Guidelines allow for 'equivalent greening' such as green walls where canopy trees cannot be provided but does not provide guidance on what equivalent greening is or how much is required.¹⁰⁵

The City of Melbourne's Green Factor Tool was recommended as a good tool for calculating equivalent greening.¹⁰⁶ Green Factor is a green infrastructure assessment tool which helps with designing and constructing environmentally friendly new buildings. It is also used to progress the inclusion of green infrastructure in new buildings.¹⁰⁷ The City of Melbourne told the Committee:

In an inner-city context sometimes achieving those requirements for canopy cover is not feasible considering the constrained sites, so we do need an equivalent to be put forward in the planning scheme and really commend the Green Factor tool, which puts forward other green infrastructure that could be achieved to achieve a certain Green Factor score. We really commend and put forward that tool and encourage that to be researched in more detail.¹⁰⁸

The Committee generally agrees that the Green Factor Tool is effective in assessing and helping drive the inclusion of green infrastructure in new buildings and supports its use, along with the concept and its adaptability in other local government areas.

⁹⁸ Ms Karen Bayly, *Transcript of evidence*, p. 16.

⁹⁹ Darebin Appropriate Development Association, *Submission 8*, p. 7.

¹⁰⁰ City of Greater Dandenong, *Submission 10*, p. 3.

¹⁰¹ City of Yarra, *Submission 30*, p. 5; Moonee Valley City Council, *Submission 37*, p. 10.

¹⁰² Australian Institute of Architects, *Submission 54*, p. 28.

¹⁰³ See, for example, Ms Karen Bayly, *Transcript of evidence*, p. 16; Manningham Council, *Submission 36*, p. 7.

¹⁰⁴ Ms Karen Bayly, *Transcript of evidence*, p. 16; City of Greater Dandenong, *Submission 10*, p. 3; Moreland City Council, *Submission 39*, p. 5.

¹⁰⁵ Ms Karen Bayly, *Transcript of evidence*, p. 16.

¹⁰⁶ *Ibid.*; City of Melbourne, *Submission 51*, p. 7.

¹⁰⁷ City of Melbourne, *Green Factor tool*, <<https://www.melbourne.vic.gov.au/community/greening-the-city/green-infrastructure/Pages/green-factor-tool.aspx>> accessed 1 June 2022.

¹⁰⁸ Ms Lavanya Arulanandam, *Transcript of evidence*, p. 28.

Several stakeholders also raised the issue of setback and separation, noting its importance in providing sufficient space for landscaping.¹⁰⁹ Stakeholders noted that adequate space for setbacks is key, with the Manningham Council outlining that:

front, side and rear boundary setbacks are key contributors to the provision of landscaping on a development site. A 1 metre side boundary setback will not provide adequate space for the planting of a canopy tree to soften the built form and minimise visual impacts to neighbouring properties. Appropriate setbacks, deep soil planting and landscaping are fundamental to the success of any development and this should be clearly reflected throughout the apartment standards.¹¹⁰

The Committee notes the importance of appropriate spacing and separation around setbacks and the connection to effective landscaping. A more detailed discussion around building setback and separation can be found in Section 6.3 of this report.

Some stakeholders felt that the landscaping standards in the Guidelines could be too onerous for smaller developments.¹¹¹ The Urban Development Institute of Australia, Victorian Division (UDIA Victoria) argued that they ‘disproportionately impact on projects of 40 apartments or less by reducing the yield and increasing construction costs, thereby making it harder to meet feasibility requirements’.¹¹²

Other stakeholders highlighted that prescriptive landscaping requirements could be ‘counterproductive to good design’¹¹³ and not allow for flexibility in how landscaped area is provided.¹¹⁴ UDIA Victoria recommended that landscaping requirements be amended, arguing that they should be ‘responsive to the site and urban context, rather than applying uniform requirements’.¹¹⁵

Several stakeholders also raised concerns around the maintenance of landscaped spaces, noting it as a major issue.¹¹⁶ In its submission, the City of Greater Dandenong argued that while the provision of landscaping can improve external amenity, neighbourhood character and a green outlook, ongoing maintenance is difficult to enforce.¹¹⁷ Other stakeholders suggested that such maintenance is often left to individual apartment owners who may not be able to maintain landscaping over the long-term, potentially leading to the loss of landscaping.¹¹⁸ The Committee notes the concern outlined by stakeholders, particularly around ongoing maintenance of landscaped spaces. It also highlights that solutions could be addressed in changed

¹⁰⁹ See, for example, Ms Tanya Tescher, *Transcript of evidence*, p. 49; Darebin Appropriate Development Association, *Submission 8*, p. 7; City of Melbourne, *Submission 51*, p. 8.

¹¹⁰ Manningham Council, *Submission 36, attachment 1*, p. 3.

¹¹¹ Urban Development Institute of Australia, Victorian Division, *Submission 26*, received 29 October 2021, p. 2.

¹¹² *Ibid.*

¹¹³ Housing Industry Association, *Submission 38*, received 30 October 2021, p. 3.

¹¹⁴ Property Council of Australia, *Submission 28*, received 29 October 2021, p. 5.

¹¹⁵ Urban Development Institute of Australia, *Submission 26*, p. 3.

¹¹⁶ See, for example, City of Greater Dandenong, *Submission 10*, p. 3; Moonee Valley City Council, *Submission 37*, p. 5; Manningham Council, *Submission 36, attachment 1*, p. 3.

¹¹⁷ City of Greater Dandenong, *Submission 10*, p. 3.

¹¹⁸ Moonee Valley City Council, *Submission 37*, p. 5; Manningham Council, *Submission 36, attachment 1*, p. 3.

roles and responsibilities around maintenance. Maroondah City Council, for example, recommended that landscape maintenance should be managed by Owners Corporations.¹¹⁹

FINDING 48: While landscaping is an important part of apartment developments and can improve external amenity, there are opportunities for improvement around neighbourhood character, a green outlook, and ongoing maintenance arrangements.

RECOMMENDATION 18: The Department of Environment, Land, Water and Planning amend the *Better Apartments Design Standards* to clarify roles and responsibilities around ongoing maintenance of landscaping.

6.7 Noise impacts and attenuation

In terms of building performance, BADS contains a noise impact standard to protect residents from significant noise where apartments are located near industrial areas, major roads and railway lines. Specific noise levels are in place for developments located within noise influence areas, for example, being within 300 metres of industrial zones.¹²⁰

However, BADS does not currently contain any requirements for the consideration of noise that is created within apartment buildings, for example, in between apartments or floors. For this reason, many stakeholders felt that the standards did not provide for adequate noise reduction.¹²¹ Stakeholders highlighted that noise impacts can be found in apartments next to each other, between different floors, from building features such as garage doors, and from outside such as street noise or noise from neighbouring buildings.

The Blackburn Village Residents Group noted that apartments located in noisy areas (such as on busy streets) may have adequate noise protection when double-glazed windows are shut but not when they are open, meaning that residents must choose between letting in fresh air and keeping out noise.¹²² BADS acknowledges this issue and states that an alternate source of ventilation should be provided in such noisy areas.¹²³

To address this issue, stakeholders such as Maroondah City Council suggested there should be 'a requirement to assess acoustic treatments between floors or between

¹¹⁹ Maroondah City Council, *Submission 32*, p. 6.

¹²⁰ Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, pp. 95–96.

¹²¹ See, for example, Office of the Victorian Government Architect, *Submission 16*, p. 2; Mr Stan Capp, *Submission 42*, received 31 October 2021, p. 6; Blackburn Village Residents Group, *Submission 46*, p. 4; City of Yarra, *Submission 30, attachment 1*, pp. 5–6; Dr Tom Alves, *Transcript of evidence*, p. 7; Frankston City Council, *Submission 18*, p. 3; Moonee Valley City Council, *Submission 37*, p. 4; Maroondah City Council, *Submission 32*, p. 7.

¹²² Blackburn Village Residents Group, *Submission 46*, p. 4.

¹²³ Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, p. 100.

apartments'.¹²⁴ The City of Yarra and others also supported standards to consider noise sources within apartment developments.¹²⁵

There were also some concerns raised with the current operation of the noise impacts standard. Frankston City Council recommended further research be undertaken with a view to expanding the requirements for mandatory noise attenuation to include arterial roads and tram lines.¹²⁶ The City of Yarra stated that many busy roads, such as parts of Hoddle Street, did not meet the 40,000 Annual Average Daily Traffic Volume (AADTV) threshold for noise protection, and recommended that the limit be reduced.¹²⁷

FINDING 49: Noise reduction standards in the *Better Apartments Design Standards* require an update to better address internal and external noise impacts.

RECOMMENDATION 19: The Department of Environment, Land, Water and Planning update the *Better Apartments Design Standards* to include standards to address noise impacts found internally within apartment buildings, and also to strengthen current requirements that apply to external noise issues.

6.8 Ventilation of common areas

Ventilation of individual apartments/rooms is discussed in Section 5.8. However, another important factor in this area is to ensure adequate ventilation of common areas and corridors. BADS states that common areas and corridors should '[i]nclude at least one source of natural light and natural ventilation'.¹²⁸

Stakeholders raised some concerns with poor ventilation practices in shared spaces, for example, long internal corridors were seen as difficult to ventilate.¹²⁹ It was also noted by Moreland City Council that more consideration is required to introduce ventilation as well as other positive aspects to improve into the amenity of common areas:

Common circulation areas (stairs, hallways etc.) typically have little to no access to natural light and are considered as sole use spaces. Consideration of these spaces as 'habitable' and an opportunity for positive space – outlook, ventilation, circulation, with better integration of these common thoroughfares with light courts and building separation to improve the amenity and safety of these spaces.¹³⁰

¹²⁴ Maroondah City Council, *Submission 32*, p. 7.

¹²⁵ City of Yarra, *Submission 30*, p. 3; Mr Stan Capp, *Submission 42*, p. 6.

¹²⁶ Frankston City Council, *Submission 18*, p. 3.

¹²⁷ City of Yarra, *Submission 30, attachment 1*, p. 5.

¹²⁸ Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, p. 91.

¹²⁹ See, for example, Ms Bronwen Hamilton, Design Manager and Principal Urban Designer, City of Melbourne, Public hearing, Melbourne, 15 November 2022, *Transcript of evidence*, p. 23; Hobsons Bay City Council, *Submission 31*, p. 4.

¹³⁰ Moreland City Council, *Submission 39*, p. 12.

Ensuring ventilation in shared spaces such as corridors was seen as particularly important to prevent the spread of COVID-19.¹³¹ The City of Melbourne advised the Committee that design responses are already being considered in this area, including to improve ventilation:

The particular design responses to COVID that we began to see particularly in the streamlined planning processes were the need for increased dimensions of communal circulation areas; the need for additional access points, including external stairwells; and greater consideration of cross ventilation and air quality generally and movement through apartments. That also had implications for the length of corridors and I guess real relevance to the sort of site layout ... about not having really, really long corridors that are hard to ventilate and with kind of stagnant air. So they are all issues related to proximity of people and air quality.¹³²

There was strong support for BADS to be updated to improve natural ventilation in shared spaces.¹³³ Other suggestions were also put forward by stakeholders, for example, the Strata Community Association recommended the use of CO2 monitors and air purifiers, similar to those being used in schools, for multi-unit buildings where improved ventilation is needed.¹³⁴

FINDING 50: Ensuring natural ventilation is an important consideration to improve the amenity and performance of shared spaces in apartment buildings.

RECOMMENDATION 20: The Department of Environment, Land, Water and Planning incorporate provisions into the *Better Apartments Design Standards* around improved ventilation in common areas in new buildings.

6.9 Waste and recycling

The provision of good waste management facilities is a standard in BADS to ‘minimise the impacts of waste on the health and wellbeing of occupants and the amenity of the public realm’.¹³⁵ The standards include requirements for waste and recycling enclosures, bin washing facilities, and collection, separation and storage of waste and recyclables.¹³⁶

¹³¹ See, for example, City of Greater Dandenong, *Submission 10*, p. 3; Hobsons Bay City Council, *Submission 31*, p. 4; Blackburn Village Residents Group, *Submission 46*, p. 7.

¹³² Ms Bronwen Hamilton, *Transcript of evidence*, p. 23.

¹³³ See, for example, City of Yarra, *Submission 30*, p. 5; Manningham Council, *Submission 36*, p. 2; Moonee Valley City Council, *Submission 37*, p. 5; Moreland City Council, *Submission 39*, p. 12; Blackburn Village Residents Group, *Submission 46*, p. 7; City of Melbourne, *Submission 51*, p. 9.

¹³⁴ Strata Community Association, *Submission 52*, received 5 November 2021, p. 3.

¹³⁵ Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, p. 106.

¹³⁶ *Ibid.*

The Victorian Government is introducing a four-stream waste and recycling system for Victorian households (glass, food organics and garden organics (FOGO), mixed recyclables and household rubbish).¹³⁷ To facilitate an integrated approach to this system, stakeholders, such as the Moonee Valley City Council, considered that BADS requires an update to provide that new apartment buildings should have waste facilities to enable the four-stream waste collection.¹³⁸ Moreland City Council also particularly noted that the four-stream system may require the provision of larger bin storage areas, as well as other mechanisms such as waste chutes in high-rise apartment buildings.¹³⁹ MAV noted that that on a more general level, the planning system must be enabled to implement these complicated changes, for example, '[r]etrofitting compatibility with new collection systems is far more complicated for apartment buildings than finding space to put an additional bin on the kerbside'.¹⁴⁰

From a residents' perspective, a number of concerns were raised regarding the provision of waste and recycling services.¹⁴¹ For example, DADA noted concerns with waste areas being located in garages and car parks, lack of space for all bins required to be put out creating long and unsafe rows on the curb, and hazards when people put out waste when vacating properties.¹⁴² Another key concern was raised about the separation of waste and recycling. Stakeholders quoted apartment residents who said that lack of space in apartments meant it was difficult to separate waste,¹⁴³ or that the separate bins were collected by one company who put all types of waste in together.¹⁴⁴

FINDING 51: The new four-stream system for waste collection will require some policy consideration within the *Better Apartments Design Standards*.

RECOMMENDATION 21: The Department of Environment, Land, Water and Planning update the *Better Apartments Design Standards* to incorporate the introduction of the four-stream waste and recycling system, as well as other updates to strengthen waste collection practices.

¹³⁷ State Government of Victoria, *Standardising household recycling across Victoria*, 2022, <<https://www.vic.gov.au/Standardising-household-recycling-across-Victoria>> accessed 19 April 2022.

¹³⁸ See, for example, Municipal Association of Victoria, *Submission 27*, p. 14; Moonee Valley City Council, *Submission 37*, p. 6; Moreland City Council, *Submission 39*, p. 12; Hobsons Bay City Council, *Submission 31*, p. 4.

¹³⁹ Moreland City Council, *Submission 39*, p. 12.

¹⁴⁰ Municipal Association of Victoria, *Submission 27*, p. 14.

¹⁴¹ See, for example, Ms Kirsty Ellem, *Submission 13*, p. 2; Strata Community Association, *Submission 52*, p. 4.

¹⁴² Darebin Appropriate Development Association, *Submission 8*, pp. 8–9.

¹⁴³ Project HOME, *Submission 43*, p. 8.

¹⁴⁴ Dr Nicola Willand, Project HOME, Centre for Urban Research, School of Global, Urban and Social Studies, RMIT University, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 38.

6.10 Building safety

This section addresses a number of issues raised during the course of the Inquiry around building safety. Primarily, the Committee examined fire alarms and building defects.

6.10.1 Fire alarms

Fire alarms are regulated by the Victorian *Building Regulations 2018*, under Part 9 ‘Fire Safety Requirements’ which outlines the requirements for fire alarm systems throughout different types of buildings, consistent with the NCC.¹⁴⁵ The *Building Act 1993* gives councils the responsibility for enforcing the compliance and maintenance of essential safety measures (ESMs) in apartment buildings.¹⁴⁶ ESMs are defined in the *Building Regulations 2018* as safety features such as exit doors, emergency lifts, fire detection and alarm systems, smoke alarms and sprinkler systems.¹⁴⁷

The Victorian Building Authority (VBA) highlighted the critical importance of including ESMs in apartment design standards, which if well maintained, can provide residents with more time to exit a building and lessen the chance of fire spreading.¹⁴⁸ VBA explained that:

Building owners are required to prepare an annual ESM report that provides evidence that these maintenance checks have been carried out by an appropriate practitioner, and councils monitor these reports.¹⁴⁹

The VBA is required under the *Building Act 1993* to conduct or promote research relating to the regulation of both the building and plumbing industries in Victoria.¹⁵⁰ As an example of this, the VBA advised it is currently undertaking a research project into the ‘routine servicing of wet fire protection equipment’ such as sprinklers, pump sets, hose reels and hydrants.¹⁵¹ VBA explained to the Committee that:

VBA does take an active role in ESMs, though. We do educate and inform consumers and practitioners and building owners and managers on the importance of the ESMs and their role in saving lives. We have produced several instructional podcasts aimed towards building owners and managers and also provide readily accessible information on ESMs across our website.¹⁵²

¹⁴⁵ *Building Regulations 2018* (Vic), pt 9.

¹⁴⁶ Dr Todd Bentley, Chief Risk Officer, Victorian Building Authority, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 21.

¹⁴⁷ Victorian Building Authority, *Submission 23*, received 29 October 2021, p. 2.

¹⁴⁸ Dr Todd Bentley, *Transcript of evidence*, p. 21.

¹⁴⁹ *Ibid.*, p. 23; Victorian Building Authority, *Submission 23*, p. 3.

¹⁵⁰ Victorian Building Authority, *Submission 23*, p. 3.

¹⁵¹ Dr Todd Bentley, *Transcript of evidence*, p. 21.

¹⁵² *Ibid.*

BADS provides some further direction on mitigating fire risk through guidance to external walls and materials, and to site services.¹⁵³ Still, some councils report occasions where certain site services have not been adequately provided for, including fire services cupboards.¹⁵⁴ In their submission, Engineers Australia highlighted NSW as an example where major defects within apartment buildings have related to fire safety, as well as a failure to maintain essential services. Engineers Australia stated that the reasons for these defects include ‘poor engineering design and specification, poor construction techniques, poor construction management and site supervision and lack of sufficient inspections and proper commissioning.’¹⁵⁵

While Engineers Australia commended the efforts that the Victorian Government has made to enhance enforcement and compliance of fire safety systems, particularly through the Victorian Cladding Taskforce¹⁵⁶ and the Victorian *Building Regulations 2018*, it encouraged that further investigations and reforms to improve the standard of fire safety quality for all buildings including apartments should be a consideration for the Committee.¹⁵⁷

The Committee notes that a Building Reform Expert Panel was established in 2021 and is currently undertaking a comprehensive review of Victoria’s building system with a general focus on compliance.¹⁵⁸ The Expert Panel has been asked to specifically advise on the changes necessary to ensure that Victoria’s building regulatory system ‘delivers safe, compliant, durable, affordable and sustainable housing and buildings efficiently and effectively’.¹⁵⁹ The associated *Framework for Reform: Modernising Victoria’s Building System* is considering ‘increasing oversight of the setting of ESMs and monitoring of their maintenance’.¹⁶⁰ A further discussion paper will be released in 2022, and recommendations for a new Victorian Building Act are expected in 2023.¹⁶¹

6.10.2 Building defects

Building defects and warranties for consumers are considered under the *Domestic Building Contracts Act 1995* (Vic). Defects are reportable to Consumer Affairs Victoria, who defines building defects as ‘[w]ork that is in breach of the contract by failing to maintain a specified standard or quality, or is a breach of any implied warranty.’¹⁶²

¹⁵³ Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, pp. 48, 87.

¹⁵⁴ Hobsons Bay City Council, *Submission 31*, p. 4.

¹⁵⁵ Engineers Australia, *Submission 35*, p. 4.

¹⁵⁶ The Victorian Cladding Taskforce is discussed in detail at Section 6.10.2 below.

¹⁵⁷ Engineers Australia, *Submission 35*, p. 10.

¹⁵⁸ Building Review Secretariat, *Expert Panel’s comprehensive review of Victoria’s building system*, <<https://engage.vic.gov.au/expert-panels-comprehensive-review-victorias-building-system>> accessed 2 June 2022.

¹⁵⁹ Ibid.

¹⁶⁰ State Government of Victoria, *Framework for reform: Modernising Victoria’s building system*, p. 49.

¹⁶¹ State Government of Victoria, *Building system review, 2022*, <<https://www.vic.gov.au/building-system-review>> accessed 22 April 2022.

¹⁶² Consumer Affairs Victoria, *Building definitions*, <<https://www.consumer.vic.gov.au/housing/building-and-renovating/definitions>> accessed 2 June 2022.

At a national level, in response to reported shortcomings in the implementation of the NCC across multiple jurisdictions, in August 2017 the national Building Ministers' Forum (BMF) requested an expert assessment of the effectiveness of compliance and enforcement systems for the building and construction industry.¹⁶³ Broad stakeholder consultation was undertaken to consider issues impacting the effective implementation of the NCC under a wide terms of reference that included examination of quality assurance and auditing.¹⁶⁴

The resulting report titled *Building Confidence – Improving the effectiveness of compliance and enforcement systems for the building and construction industry across Australia* (the Building Confidence Report) was made public in April 2018.¹⁶⁵ The Building Confidence Report provides a package of reforms through 24 recommendations to establish a national best practice model for compliance and enforcement.¹⁶⁶

The BMF also oversaw an amendment to the NCC adopted in March 2018, introducing several measures to improve fire safety in high-rise buildings.¹⁶⁷ The recommendations in the Building Confidence Report and the Framework for Reform have not yet been implemented in Victoria.

There was agreement from stakeholders that the current regulatory system was insufficient for detecting building faults.¹⁶⁸ Suggested improvements included:

- making practitioners personally accountable when a building does not meet standards, similar to the WorkSafe safety accountability¹⁶⁹
- registration of professional engineers¹⁷⁰
- a system for rating builders' trustworthiness, similar to the NSW Independent Construction Industry Rating Tool (iCIRT)¹⁷¹

¹⁶³ Australian Government Department of Industry, Science, Energy and Resources, *Building Confidence: Building Ministers' Forum Expert Assessment*, 2018, <<https://www.industry.gov.au/data-and-publications/building-confidence-building-ministers-forum-expert-assessment>> accessed 2 June 2022.

¹⁶⁴ Peter Shergold and Bronwyn Weir, *Building Confidence: Improving the effectiveness of compliance and enforcement systems for the building and construction industry across Australia*, 2018, p. 3.

¹⁶⁵ Australian Institute of Building Surveyors, *The Shergold Weir report*, 2018, <<https://aibs.com.au/Public/News/2018/ShergoldWeir.aspx>> accessed 29 April 2022.

¹⁶⁶ Australian Government Department of Industry, *Building Confidence: Building Ministers' Forum Expert Assessment*.

¹⁶⁷ Department of Environment, Land, Water and Planning, *Victorian Cladding Taskforce: Report from the Co-Chairs*, 2019, p. 10.

¹⁶⁸ See, for example, Ms Alesha Printz, General Manager, Victorian Division, Engineers Australia, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, p. 57; Darebin Appropriate Development Association, *Submission 8*, p. 6; Dr Paulo Vaz Serra, Mr Steven Richardson and Dr Andrew Martel, Construction Program, Faculty of Architecture, Building, and Planning, University of Melbourne, *Submission 45*, received 31 October 2021, p. 8; Urban Design Forum Australia, *Submission 53*, p. 11.

¹⁶⁹ Dr Andrew Martel, Faculty of Architecture, Building, and Planning, University of Melbourne, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 24.

¹⁷⁰ Ms Alesha Printz, *Transcript of evidence*, p. 57.

¹⁷¹ Mr Baoying Tong, Senior Manager, Building Reform and Projects, Engineers Australia, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, p. 59. See also NSW Government, *Rating tool to lift buyer trust in first new apartment builds*, 2021, <<https://www.nsw.gov.au/news/icirt-apartment-rating-system>> accessed 29 April 2022.

- reintroduction of government building inspectors¹⁷²
- a greater requirement for inspections during the construction phase.¹⁷³

Other suggestions from stakeholders were aimed at providing assurance to apartment owners who may find or be concerned with potential defects in their property, including:

- mandating that builders participate in a bond or insurance scheme for repairs of defects¹⁷⁴
- requiring builders to provide a building manual to owners on completion to assist with maintenance and repairs¹⁷⁵
- providing easier pathways for owners to pursue litigation or compensation in the justice system.¹⁷⁶

The Committee notes that a number of these improvements are recommended in the Building Confidence Report¹⁷⁷ and that the NCC is currently under review with the updated version due to be adopted in September 2022.¹⁷⁸

A separate review relating to building safety, specifically non-compliant combustible cladding, was undertaken by the Victorian Cladding Taskforce, which tabled its interim report in December 2017 and the *Victorian Cladding Taskforce Report from the Co-Chairs*¹⁷⁹ (the Final Report) in July 2019.¹⁸⁰ In September 2018, the Victorian Parliament passed the *Building Amendment (Registration of Trades and Other Matters) Act 2018*, which made a series of key amendments to the *Building Act 1993* and the *Local Government Act 1989* in response to recommendations of the Interim Report.¹⁸¹

The Final Report made 37 recommendations including that the VBA and the City of Melbourne complete audits of priority buildings, and as of July 2019, 2,227 buildings had been inspected.¹⁸²

The Taskforce was wound up in July 2019, and work was transferred to DELWP, the Victorian Building Authority, and Cladding Safety Victoria—established as a dedicated agency to help rectify issues with buildings identified through the state-wide audit, as a recommendation of the Final Report.¹⁸³ The Committee commends the progress of

¹⁷² Darebin Appropriate Development Association, *Submission 8*, p. 6.

¹⁷³ Urban Design Forum Australia, *Submission 53*, p. 11.

¹⁷⁴ Blackburn Village Residents Group, *Submission 46*, p. 10.

¹⁷⁵ Strata Community Association, *Submission 52*, p. 5.

¹⁷⁶ Ibid.; Blackburn Village Residents Group, *Submission 46*, p. 10.

¹⁷⁷ Shergold and Weir, *Building Confidence*, pp. 39–41.

¹⁷⁸ Australian Building Codes Board, *NCC 2022 preview and adoption dates*.

¹⁷⁹ Department of Environment, Land, Water and Planning, *Victorian Cladding Taskforce: Report from the Co-Chairs*, p. 9.

¹⁸⁰ Ibid.

¹⁸¹ Ibid., p. 10.

¹⁸² Ibid., pp. 7–8, 10.

¹⁸³ State Government of Victoria, *Cladding Rectification Program*, 2021, <<https://www.planning.vic.gov.au/building-policy/cladding-rectification-program>> accessed 2 June 2022.

the Victorian Cladding Taskforce, however, it notes that building defects extend beyond cladding and fire safety.

The Victorian Government established the independent Building Reform Expert Panel in 2021 to review the building legislative and regulatory system over three stages (from 2021 to 2023).¹⁸⁴ The objective of the review is to ensure that Victoria's building regulatory system:

- delivers safe, compliant, durable, affordable, and sustainable housing and buildings efficiently and effectively
- protects consumers and improves confidence in the industry and regulators
- supports skilled and experienced practitioners to carry out compliant and safe practices
- supports regulators to effectively and efficiently enforce compliance.¹⁸⁵

The Building Reform Expert Panel released a discussion paper in 2021, *Framework for Reform: Modernising Victoria's Building System*, which sought stakeholder feedback on matters such as regulatory oversight and building approval and suggests several reforms relating to building inspections. The second stage discussion paper is due to be released in 2022.¹⁸⁶ It is anticipated that Stage 3 of the reform program, which will include advice on the development of a new Building Act and changes to regulations, will be finalised in 2023.¹⁸⁷

FINDING 52: The recommendations in the national *Building Confidence – Improving the effectiveness of compliance and enforcement systems for the building and construction industry across Australia* and the *Framework for Reform: Modernising Victoria's Building System* reports have not yet been implemented in Victoria. However, Victoria has taken proactive steps towards building reform through the work of the Victorian Cladding Taskforce and the Building Reform Expert Panel.

¹⁸⁴ State Government of Victoria, *Framework for reform: Modernising Victoria's building system*, pp. 1-2.

¹⁸⁵ State Government of Victoria, *Building system review*.

¹⁸⁶ Ibid.

¹⁸⁷ Ibid.

7 Improvements to external amenity and urban context

As noted in Chapter 2, the 2021 update to the *Better Apartments Design Standards* (BADs) focused on improving the external amenity of apartment buildings with the aim of supporting ‘successful design that contributes positively to the urban context and the neighbourhood character’.¹

While the effects of those updates are yet to be seen due to its recent implementation, this chapter discusses further improvements that stakeholders suggested could be made to enhance the external amenity of apartment buildings and ensure greater connection with the local urban context.

7.1 External building amenity

This section assesses improvements that can be made to the external amenity of apartment buildings.

7.1.1 Building height and density

Density is becoming an increasingly relevant planning concept in the Victorian landscape, for example, through Infrastructure Victoria’s (IVs) *Infrastructure strategy 2021-2051* which outlined the goal of reviewing planning settings to allow increased housing density, and also through its work on ‘density done well’.² Density is similarly part of the *Plan Melbourne strategy 2017-2050* to deliver more medium and higher density developments near services, jobs and public transport.³ In this environment, Urban Design Forum Australia (UDFA) noted in its submission that density controls can be an effective instrument for determining the maximum quantum of development that can be permitted on a given site, by guiding both the physical development as well as local area infrastructure to ensure appropriate management of population increases.⁴ Density control is currently not directly considered as part of BADs.

Building height is a related control that ‘helps shape the desired future character of a place relative to its setting and topography’, impacting issues such as daylight and solar access, roofing, wind protection and residential amenity.⁵ In BADs, building height is described as part of the overall building setback, with guidance outlining that building

1 Department of Environment, Land, Water and Planning, *Apartment design guidelines for Victoria*, 2021, p. 4.

2 Infrastructure Victoria, *Victoria’s infrastructure strategy 2021-2051: Volume 1*, 2021, p. 116.

3 Department of Environment, Land, Water and Planning, *Plan Melbourne: 2017-2050: Five-year implementation plan*, 2019, p. 50.

4 Urban Design Forum Australia, *Submission 53*, received 7 November 2021, p. 6.

5 NSW Department of Planning and Environment, *Apartment design guide: Tools for improving the design of residential apartment development*, 2015, p. 30.

setbacks should typically increase when the height of a building increases to provide adequate daylight, privacy and outlook for dwellings.⁶ The 2021 update of BADS includes a new standard to prevent the generation of excessive wind by tall buildings that affects pedestrians and nearby public spaces. This includes guidance to make new buildings a similar height to the surrounding ones, and not more than twice the height of those buildings.⁷

Building height and density affect liveability and the internal amenity of apartments, and may have flow-on effects on residents' experience of the local neighbourhood, as noted by Ignite during the public hearings:

The scale of the developments and the height actually already play into a lot of factors of amenity and liveability of units and then the design itself. It really depends on the place and the market. So yes, the developers and the architects who work in the space of larger developments in the city would be very different to those working in the outer areas. But that is actually driven by thinking about who they are targeting.⁸

Other stakeholders, such as the Municipal Association of Victoria (MAV), suggested that clearer policy language could be provided on building height within Victorian standards:

building height is always an ongoing issue and councils often do want to have ability to be a bit more prescriptive, but the state policy and the approach of the department of planning are to not be overly prescriptive in many matters. So the ability to be more specific in language would be useful in many instances.⁹

Increased clarity around density was also put forward by various stakeholders. The Victorian Planning Authority (VPA) noted in its submission that it aims to deliver housing and populations through the 'density done well' approach, which focuses on increased densities in the context of well-designed and connected neighbourhoods. The VPA advocated for clearer guidance on issues dealing with the public realm, which includes height and density controls in urban contexts.¹⁰ It considered that this guidance should particularly create liveable high-density precincts which:

- focus on designs that are responsive to human scale at street level
- consider 'acceptable built form transition to sensitive interfaces' (i.e. how they interact with adjacent buildings with sensitive lower density residential uses and heritage buildings)
- limit adverse impacts on the surrounding neighbourhood
- improve local connections to public open space and pedestrian access

⁶ Department of Environment, *Apartment design guidelines for Victoria*, p. 17.

⁷ *Ibid.*, p. 62.

⁸ Mr Derek Huynh, Research Member, Ignite, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 22.

⁹ Mr James McLean, Senior Policy Adviser, Natural and Built Environment, Municipal Association of Victoria, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, p. 7.

¹⁰ Victorian Planning Authority, *Submission 15*, received 27 October 2021, pp. 2-3.

- create a ‘sense of place by encouraging community gathering, social interaction and inclusion’.¹¹

In relation to the impact on the public realm, the VPA noted at public hearings that more work is required at a strategic policy level on these interrelated concepts:

There is not a fixed relationship between height, scale, density and the public realm. They are certainly interrelated—they impact each other and influence each other—but basically the right public realm improvement or enhancement needs to be done through strategic planning in our work or what local councils do. But there may be some parameters in built form controls that are more universal, that are more applicable state-wide, and they are based on human needs like access to sunlight and ventilation et cetera. This requires a bit of consideration around what standards can be strengthened and can be applied state-wide. Built form is always a contested area, as you all know. Heights and scales and densities are of concern from the community’s or council’s point of view, and getting the public realm quality right is our main area of focus. Therefore we think there may be areas for future consideration to strengthen those areas, but, as you said, it is very subjective, it is not a linear proposition.¹²

UDFA also submitted that density controls should be considered in the Victorian context, noting that ‘[l]imiting the total amount of building on a site gives significant flexibility for a broad range of design options to respond to specific site circumstances’.¹³ Dr Tom Alves noted in his personal submission that ‘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’.¹⁴ He further suggested that the absence of site density controls had a number of flow-on effects, including the supply of primarily smaller (one and two bedroom) apartments and single aspect apartments in buildings with large floor plates, and site configurations that are often not optimal for apartment buildings. He considered that ‘[t]he 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’.¹⁵

The Australian Institute of Architects (AIA) further noted the benefit of greater clarity in strategic policy regarding density:

I think it is important that the government is clear with what their strategy is in terms of the densification, for want of a better word, of the suburbs—which suburbs, where it is going to be—that that is established and good advice is taken as to where this should be, so near public transport, near services that already exist, near health services et cetera, and that process perhaps, that talking to local councils and talking to local

¹¹ Ibid., p. 3.

¹² Ms Goksel Karpat, Urban Design Advisor, Victorian Planning Authority, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 15.

¹³ Urban Design Forum Australia, *Submission 53*, p. 6.

¹⁴ Dr Tom Alves, Head of Development, Australian Housing and Urban Research Institute, *Submission 50*, received 31 October 2021, p. 5.

¹⁵ Ibid., p. 10.

resident groups about their macro point of view, is undertaken so that that is already established as being the ground rules ... Is there enough open space? Are the schools in the area adequate et cetera?¹⁶

The Committee agrees that issues relating to building height and density should be considered further at a strategic policy level. Given the relevance of these concepts to both the internal and external amenity of apartment buildings, it is important to ensure appropriate consultation is undertaken on the range of guidance or standards that potentially could improve height and density considerations in the planning process. This would also align apartment design policy with other ongoing work in Victoria relating to density, including the 'density done well' approach.

FINDING 53: Building height and density are important planning design considerations that impact both the internal and external amenity of apartment buildings, including the local urban context.

RECOMMENDATION 22: The Department of Environment, Land, Water and Planning develop guidance on acceptable building height and density with respect to the local context to enable greater liveability in high-density areas.

7.1.2 Wind impacts

As noted earlier, the 2021 update to BADS contained a new standard to prevent excess winds generated by apartment buildings with five or more storeys. The standard provides that the 'form, layout and design of development should minimise adverse wind impacts within the site or on surrounding land'.¹⁷ It also includes the need for a wind impact assessment to be conducted by a suitably qualified wind engineer in certain circumstances.¹⁸

The standard has only been adopted recently and therefore the Committee heard views on the policy setting, rather than on its implementation. The Urban Development Institute of Australia, Victorian Division (UDIA Victoria) recommended removing wind test requirements and instead suggested that local councils should be required to carry out municipal-wide assessments to determine the wind impact risks in an area, taking into account both residential and commercial buildings. It argued that the requirements for wind assessments only relate to residential development even though commercial buildings may also contribute to the wind situation.¹⁹ Discussing the need to consider wind impacts at the precinct level, rather than at the apartment building level, UDIA Victoria stated, in relation to Box Hill:

¹⁶ Mr James Legge, Director, Six Degrees Architects, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 35.

¹⁷ Department of Environment, Land, Water and Planning, *Better apartments in neighbourhoods: Discussion paper 2019*, 2019, p. 25.

¹⁸ Department of Environment, *Apartment design guidelines for Victoria*, p. 67.

¹⁹ Urban Development Institute of Australia, Victorian Division, *Submission 26*, received 29 October 2021, p. 11.

in the case of Box Hill that would be better done on a precinct-wide basis and by looking at the ultimate build-out scenario, and then by going through that process that would give the local planning teams a suite of tools that they could then ensure that the developers that are coming forward with new applications are responding to. And that might be, you know, larger awnings over the footpaths or greater amounts of street trees to be planted in areas or some sort of different fin arrangements on the buildings. There are a lot of technical ways that wind can be managed so that it does not have the big effect at the ground plane, but some sort of master plan wind study is a better way of doing that than asking individual building owners or developers to ad hoc respond to something that might get built up over 20 or 30 years.²⁰

Some stakeholders further outlined that a lack of available professional expertise will affect the utility of the wind assessment requirement.²¹ Noting that the process for wind modelling is unclear, costly and time consuming, UDIA Victoria explained that there are ‘only a handful of wind engineers in Melbourne’ operating with a backlog of at least two months.²² The lack of expertise to assess wind tunnel impacts in many local councils was also acknowledged by MAV in its submission.²³

Further, some stakeholders outlined the need for more clarity to guide implementation of the new standard.²⁴ For example, the Moonee Valley City Council suggested a range of additional guidance would be useful including on triggers for assessments, design guidance and assessment criteria.²⁵

FINDING 54: It is likely too early to consider the impact of the new *Better Apartments Design Standards* relating to wind and the prevention of excessive winds by tall apartment buildings. The issue should be considered to determine the best ways to handle wind concerns on a precinct or individual building level, or as a combination of both.

RECOMMENDATION 23: The Department of Environment, Land, Water and Planning provide assistance to local governments at a precinct level to consider wind impacts in high density and major activity centres.

7.1.3 Street integration

BADS aims for apartment buildings to demonstrate ‘street integration’ which allows occupants to view activities outside, accommodates activities that spill outside into

²⁰ Mr Ashley Williams, Board Member, Urban Development Institute of Australia Victorian Division, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, p. 51.

²¹ Property Council of Australia, *Submission 28*, received 29 October 2021, p. 4; Hobsons Bay City Council, *Submission 31*, received 29 October 2021, p. 5.

²² Urban Development Institute of Australia, *Submission 26*, p. 11.

²³ Municipal Association of Victoria, *Submission 27*, received 29 October 2021, p. 6.

²⁴ City of Greater Dandenong, *Submission 10*, received 22 October 2021, p. 4; Property Council of Australia, *Submission 28*, p. 5; Engineers Australia, *Submission 35*, received 29 October 2021, p. 7.

²⁵ Moonee Valley City Council, *Submission 37*, received 29 October 2021, p. 12.

street life and ensures buildings are welcoming and visually interesting.²⁶ Street integration is intended to contribute to pedestrians' safety and enjoyment of the public realm and provides a sense of address:

Integration with the street occurs when an apartment building provides active uses onto the street, public space or laneway, both at the street level and the upper levels. Integration contributes to the safety and amenity of the public realm by providing passive surveillance, visual interest and an outlook for apartment occupiers.²⁷

As part of the 2021 update, the standard for street integration was changed to provide for greater surveillance, the integration of building services more seamlessly into the building façade, the reduction of visual impact of services such as car parks, and to avoid blank walls.²⁸ While acknowledging these efforts, some stakeholders considered that the standard requires further detail. For example, the City of Melbourne believed that the current standard does not account for the connectivity of individual apartments to the street, noting a balance must be achieved between connectivity and maintaining privacy and security.²⁹ Other feedback included the need for guidance to ensure street trees are planted and more prescriptive standards for street frontage.³⁰

The Committee notes the progress being made in the area of street integration in the examples included in BADS, for example, key features of apartment developments highlighted include:

- Nightingale 2.0: there are walkways on upper levels to provide passive surveillance, clear entry signage and integrated services
- Hawke and King: a glimpse of communal open space and passive surveillance of the public realm are provided.³¹

The Committee commends efforts to ensure street integration is accommodated in a meaningful way for communities living in and around Victoria's apartment buildings.

7.2 Master planning

Incorporating apartment development in broader master plans presents a potential solution to improving the interaction between the apartment buildings and local neighbourhoods. Master plans are 'land-use plan[s] that, when enforced through planning scheme amendments, reserves land for certain uses and includes guidelines for development'.³² Typically they include plans for the allocation of spaces, and

²⁶ Department of Environment, *Apartment design guidelines for Victoria*, p. 68.

²⁷ Ibid., p. 69.

²⁸ Department of Environment, *Better apartments in neighbourhoods*, p. 30.

²⁹ City of Melbourne, *Submission 51*, received 1 November 2021, p. 4.

³⁰ Maroondah City Council, *Submission 32*, received 29 October 2021, p. 4; City of Yarra, *Submission 30*, received 29 October 2021, p. 2.

³¹ Department of Environment, *Apartment design guidelines for Victoria*, pp. 71–72.

³² Victorian Planning Authority, *What is a master plan?*, 2018, <<https://vpa.vic.gov.au/faq/jacksons-hill-what-master-plan>> accessed 21 March 2022.

provision of open space and other key facilities.³³ At the public hearings, the AIA noted the importance of master plans in planning the public realm and streetscape activation, considering ‘[h]ow an apartment building lands in its urban context is important for the making of our cities, towns and suburbs’.³⁴ The AIA also considered that high-level planning is not yet adequately provided for in Victoria, which has impacts for the design of individual buildings:

There is no doubt that we have not had enough attention given perhaps to that precinct-scale, neighbourhood-scale planning so that the basic framework is there for success within individual buildings. On a broad scale, where you have got significant intervention into a local neighbourhood, for example, with higher density housing, it is almost too late once you are dealing with a set of controls at an individual building level. You do need to have this layered approach where there is that sophisticated assessment and review of design at a strategic planning level so that the framework and expectations are clear about what the vision is for that neighbourhood.³⁵

Master plans have been successfully utilised by certain local councils. Stakeholders drew the Committee’s attention to the City of Melbourne’s Amendment C308 as a key example of master planning.³⁶ Describing the approach of a particular precinct in NSW, the Office of the Victorian Government Architect (OVGA) outlined how high-level planning can better provide for amenity:

I was up in Newcastle recently, and there is a precinct up there called Newcastle East. And that was really interesting to review because what you find is that that was a precinct where it had one architect as a kind of master planner for the site and then three other separate architects who then worked on each parcel of land to ensure that amenity was protected. So it was a more holistic level of design thinking that was brought to the table, and it has led to some really good results there, including working with heritage buildings and adapting with those to deliver the amenity you would expect—a really good example.³⁷

As noted in Chapter 4, master plans and planning for the local context are also a feature of design in cities such as London and Toronto. Citing various international examples and specifically discussing the Toronto guidelines, the VPA noted the potential for better precinct planning to target three tiers of the urban context:

The way that they have done that is they have looked at three different levels: at the unit level, at the building level and at the neighbourhood level, and we think that is the right way for us who are precinct planners.³⁸

³³ Ibid.

³⁴ Mr James Legge, *Transcript of evidence*, p. 27.

³⁵ Ms Sarah Buckeridge, Co-managing Director, Hayball, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 34.

³⁶ See, for example, Australian Institute of Architects, *Submission 54*, received 12 November 2021, p. 9.

³⁷ Mr David Islip, Principal Adviser, Urban Design and Architecture, Office of the Victorian Government Architect, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, pp. 44–45.

³⁸ Ms Rachel Dapiran, Executive Director, Infrastructure, Strategy and Planning, Victorian Planning Authority, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 13.

A greater focus on master planning was particularly advocated for by the AIA, which noted that master planning can assist with addressing various challenges including climate change and housing affordability:

To face these challenges and capitalise on lessons learnt, governments will require built environment design expertise and master planning to support development of effective and enduring Apartment Design solutions including associated land-use planning at the immediate precinct and site level.³⁹

The Committee agrees that master plans are an increasingly important tool used in domestic and international contexts to ensure a greater level of coordination between buildings and the external urban environment, including public spaces. The Committee agrees that there is a need to strengthen the use of master plans within the Victorian context where it would help to create improved levels of amenity and deliver quality places for people to live and work in.

FINDING 55: Master plans can be used to ensure that apartment buildings and complexes are responsive to local urban context.

RECOMMENDATION 24: The Department of Environment, Land, Water and Planning work collaboratively with local government to develop guidance on effective master planning to ensure apartment complexes are responsive to local urban context.

7.2.1 Access to public open space and services

As part of considering apartments within their local precincts through initiatives such as master plans, a number of stakeholders noted that apartment developments should have adequate access to public open space within their vicinities. In its submission, MAV advocated for diversifying access to open spaces across Victoria:

There is a need for better policy at the metropolitan and indeed Victorian scale to increase access to more and diverse types of open spaces, community facilities and essential services. While inner-urban areas benefit from large and expansive parklands as well as local open spaces, community hubs and diverse services, outer suburban residents mostly have access to only small pocket parks, some larger sport grounds and a limited range of other services. By ensuring access to a diversity of open space types and community services, wellbeing is prioritised.⁴⁰

Similarly, the Australian Housing and Urban Research Institute (AHURI) discussed the shortage of open space available in some areas:

Access to amenities including both open public space, libraries and communal space is an important issue for many people in apartments since they often trade off space

³⁹ Australian Institute of Architects, *Submission 54*, p. 5.

⁴⁰ Municipal Association of Victoria, *Submission 27*, p. 10.

in their home to be near to other amenities and yet for some communities these are in short supply. Even so, some facilities are underutilised, so innovative approaches to design and consultation are necessary. Lower income householders generally have less choice in the type of housing they obtain, and so it is incumbent on governments and developers to ensure that developments have access to amenities.⁴¹

The VPA referenced South Australia as a key example providing ‘greater focus on context and connecting with the surroundings and the wider community’.⁴² Manningham Council also suggested incentivising the provision of usable communal open spaces.⁴³

In its final report on the *Inquiry into environmental infrastructure for growing populations*, tabled on 9 February 2022, the Committee included recommendations to set a target to provide Melbourne’s residents with access to a network of open spaces located closer to their place of residence, and to better map and catalogue the quantity and types of open space available to Melbourne residents.⁴⁴

FINDING 56: The Committee acknowledges the need for open spaces to support urban developments across Victoria is important and reiterates the series of findings and recommendations it made in its report on the *Inquiry into environmental infrastructure for growing populations*.

7.3 Community building

Creating liveable communities within apartment buildings and surrounding neighbourhoods requires consideration of social dimensions.⁴⁵ In its submission, MAV outlined that ‘a sense of wellbeing in apartment living’ is broader than just the apartment, and requires developing a sense of belonging and reducing isolation.⁴⁶ AHURI similarly noted the importance of ‘the wider cultural, economic, and social infrastructures that make living in that space enjoyable and meaningful’.⁴⁷ Stakeholders such as Project HOME noted findings that poor community building within apartment buildings affects low-income residents disproportionately:

In Melbourne and Perth, low-income residents and affordable housing tenants who are more at risk of being left out of social relationships tend to live in buildings where there

⁴¹ Australian Housing and Urban Research Institute, *Submission 49*, received 31 October 2021, p. 5.

⁴² Victorian Planning Authority, *Submission 15*, p. 3.

⁴³ Manningham Council, *Submission 36*, received 29 October 2021, p. 2.

⁴⁴ Parliament of Victoria, Legislative Assembly Environment and Planning Committee, *Inquiry into environmental infrastructure for growing populations*, February 2022, p. xxiii.

⁴⁵ Kathy Lloyd, Simone Fullagar and Sacha Reid, ‘Where is the ‘Social’ in Constructions of ‘Liveability’? Exploring Community, Social Interaction and Social Cohesion in Changing Urban Environments’, *Urban Policy and Research*, vol. 34, no. 4, 2016.

⁴⁶ Municipal Association of Victoria, *Submission 27*, p. 10.

⁴⁷ Australian Housing and Urban Research Institute, *Submission 49*, p. 5.

are few common spaces, and which tend to be in suburban neighbourhoods with fewer amenities such as green spaces, public infrastructures, etc.⁴⁸

To demonstrate a way in which current apartment design can reduce a sense of belonging, the UDFA highlighted the large number of apartments on each floor of a building and high turnover in Victorian apartment developments, which impacts quality of life for residents:

At present in Victoria it is entirely possible to arrange as many as 30 apartments off a single lift lobby and corridor, creating an environment more akin to a hotel corridor, than a space to foster meaningful social interaction. These corridors can then be stacked in buildings with as many as 500 apartments (in the case of Elizabeth Street North) sharing a single lobby, which takes on the anonymity of an office foyer rather than a domestic front door. If a rate of transience of a 1–2 bedroom rental apartment (11–12 months) in Victoria is taken into account, then the turnover in a building of this scale could be 10 households per week, which is extraordinarily disruptive to community formation and quality of life.⁴⁹

To address these issues, MAV considered that community building should be incorporated as part of future reform to improve connections between residents and surrounding areas, noting that these matters are not currently considered in BADS. It considered that such reform could address ‘common perceptions that new developments are ‘soulless’ and can be isolating places to live’.⁵⁰ Project HOME similarly agreed that apartment guidelines could help designers consider community building issues at an early stage to ensure that apartments are designed as homes and that ‘these homes facilitate, when relevant, interaction between households’ where those interactions would be productive.⁵¹

Project HOME also gave an example of an apartment complex in Madrid to demonstrate the opportunities for Victorian apartments to improve liveability and a sense of place for residents:

This is working-class housing. It is built for €100 000. It is cheap housing. They are kind of duplex apartments, plenty of natural light. They are six- or eight-storey blocks. You can rent an extra room if you have family come to stay because there are rooms available in bookable space. There are function rooms available for functions. There are quadrangles in the middle for kids to play, people to grow plants et cetera, whatever it is. There is a community, there are committees. There is a life of this community. At grade—on the ground floor—on the outside there are shops, there are shopfronts, so you can walk down to get your bread in the morning. And I am not talking about luxury apartments; I am talking here about families, you know, on €15 000, €20 000 a year, with young kids. This is not hard to do, and it does not have to cost a million dollars.⁵²

48 Project HOME, *Submission 43*, received 31 October 2021, p. 3.

49 Urban Design Forum Australia, *Submission 53*, p. 9.

50 Municipal Association of Victoria, *Submission 27*, p. 10.

51 Professor Ralph Horne, Project HOME, Centre for Urban Research, School of Global, Urban and Social Studies, RMIT University, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 47.

52 *Ibid.*, p. 42.

FINDING 57: Building a sense of community through connection with surrounding neighbourhoods plays a role in improving the liveability of apartments in Victoria. Fostering connections with not only the local physical urban context, but also with the broader community surrounding a development can improve the lives of residents.

7.3.1 Placemaking

To improve the sense of community and social wellbeing, some stakeholders considered that a ‘placemaking lens’ should be applied to apartment design regulation.⁵³ In this regard, stakeholders advocated for a holistic approach to increasing liveability of apartments for both apartment residents and local communities. *Plan Melbourne 2017-2050* acknowledges the importance of placemaking to urban design and planning, which involves:

a conscious strategy designed to promote people’s health, happiness, prosperity and wellbeing. It brings together a range of factors and disciplines, including economic development, urban design and environment, culture, community engagement, finance and governance. Place-making can apply to whole regions or individual neighbourhoods. In all cases it aims to capitalise on local assets, inspiration and potential.⁵⁴

The Committee understands that placemaking goes beyond the urban design of spaces to encourage the creation of ‘physical, cultural, and social identities that define a place and support its ongoing evolution’ through community-based participation.⁵⁵ It was further highlighted by AHURI that well-designed apartments and neighbourhoods are part of achieving social inclusion, but that currently low-income residents are experiencing lower quality of life:

The physical and social make-up of apartment buildings and the neighbourhood encouraged or hindered social integration, and efforts to manage apartment building common spaces seemed to have been differentiated by socio-economic conditions.

Because almost two in five Australian residents in apartments are on low income, there is a need to ensure that they have access to essential public infrastructure like community engagement programs and community led activities. However, at present, the outcomes are uneven, especially in some local government areas where lower income residents are having a lower quality of life. Key pieces of public infrastructure include open space, libraries, and community centres.⁵⁶

As outlined in Chapters 3 and 4, a number of Australian and international jurisdictions have design guidance targeted at creating a sense of place and community in

⁵³ See, for example, Australian Institute of Architects, *Submission 54*, p. 9; Victorian Planning Authority, *Submission 15*, p. 3.

⁵⁴ Department of Environment, *Plan Melbourne: 2017-2050*, p. 78.

⁵⁵ Project for Public Spaces, *What is placemaking?*, 2007, <<https://www.pps.org/article/what-is-placemaking>> accessed 1 June 2022.

⁵⁶ Australian Housing and Urban Research Institute, *Submission 49*, p. 6 (with sources).

apartment developments. Stakeholders drew the Committee's attention to examples such as Toronto's *Growing Up: Planning for Children in New Vertical Communities Urban Design Guidelines*.⁵⁷ Stakeholders cited Toronto as a key example which focuses on external relations of apartment buildings, including 'civic engagement for social interaction and inclusion'.⁵⁸

While commending the work of the Victorian Department of Environment, Land, Water and Planning (DELWP) to improve external building amenity and urban context, the Committee notes that further consideration of social and community aspects of apartment living is required. As explained, accounting for community building and placemaking of apartment developments to situate them within their neighbourhoods and precincts is an important step to improve liveability of apartments. Apartment developments are a growing feature of the Victorian housing landscape and should be designed to provide optimal environments for Victorian communities to flourish and social cohesion to be fostered. In consultation with all relevant stakeholders, the Committee is confident that apartment design standards for Victoria can be improved to meaningfully take these aspects into account.

FINDING 58: Incorporating concepts of community building and placemaking into the design of apartment developments can improve the liveability of apartments and enrich the social and community aspects of the surrounding neighbourhoods and precincts.

RECOMMENDATION 25: The Department of Environment, Land, Water and Planning work with all relevant stakeholders to incorporate community building and placemaking into Victorian apartment design policies to improve liveability of apartment buildings.

⁵⁷ See, for example, Victorian Planning Authority, *Submission 15*, p. 3; Ignite, *Submission 47*, received 31 October 2021, p. 3; Ms Arianna Garay, Research Member, Ignite, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 20; Ms Rachel Dapiran, *Transcript of evidence*, p. 13.

⁵⁸ Ms Rachel Dapiran, *Transcript of evidence*, p. 13.

8 State-wide improvements

This chapter examines the broader regulatory framework which supports apartment design regulation in Victoria. In this regard, the chapter makes a number of recommendations which may be implemented at a state-wide level, and which aim to improve the liveability of apartments and apartment buildings.

8.1 Compliance and enforcement

Design regulation involves a complex interplay of actors throughout the design and construction of an apartment, and beyond. Stakeholders involved in the Inquiry highlighted problems with enforcement and accountability of actors within the broader building and construction industries. Accordingly, several stakeholders called for a stronger compliance framework.¹ Section 8.1 assesses the compliance and enforcement framework which regulates apartment design in Victoria.

8.1.1 Design responsibility and verification

Presently, apartment design may be undertaken by both registered architects and building designers. The Committee notes that building designers are required to complete a bachelor's degree. However, there is no professional registration body which oversees or accredits the profession.² By contrast, architects are required to obtain a bachelor's and a master's degree.³ Additionally, registration as an architect is provided for under the *Architects Act 2001* (the Act). This framework is supported by certain penalties and offences for non-compliance under the Act and a legislated code of professional conduct under the *Architecture Regulations 2015*.⁴

To support a stronger compliance framework, some stakeholders to the Inquiry advocated for minimum qualifications and professional registration to be mandated for all individuals who are responsible for designing apartments and apartment buildings.⁵ These stakeholders supported mandating that apartments must be designed by registered architects only. Drawing on the New South Wales (NSW) experience, the

1 Dr Paulo Vaz Serra, Mr Steven Richardson and Dr Andrew Martel, Construction Program, Faculty of Architecture, Building, and Planning, University of Melbourne, *Submission 45*, received 31 October 2021, p. 7; Municipal Association of Victoria, *Submission 27*, received 29 October 2021, p. 14; Blackburn Village Residents Group, *Submission 46*, received 31 October 2021, p. 11; Darebin Appropriate Development Association, *Submission 8*, received 20 October 2021, pp. 2-3; City of Melbourne, *Submission 51*, received 1 November 2021, p. 3; Urban Design Forum Australia, *Submission 53*, received 7 November 2021, p. 11.

2 Australian Institute of Architects, *Submission 54, attachment 1*, received 12 November 2021, p. 2.

3 Ibid.

4 The *Victorian Architects Code of Professional Conduct* is set out in Schedule 1 to the *Architecture Regulations 2015* (Vic).

5 Australian Institute of Architects, *Submission 54*, p. 23; Australian Institute of Architects, *Submission 54, attachment 1*, p. 2; Maribyrnong City Council, *Submission 22*, received 29 October 2021, p. 9.

Australian Institute of Architects (AIA) argued that a similar change in Victoria would be in the best interest of consumers.⁶

Similarly, Maribyrnong City Council submitted that apartment buildings over four storeys warranted design by registered architects, noting that this would be consistent with other international jurisdictions. The Council stated:

With the increased complexity of apartment developments comes the need for an increased skill set to effectively design and address the myriad of standards that exist. What has become apparent is the general lack of awareness of the existing standards and what is required of each one. Looking beyond Victoria, it is common practice in other cities internationally, that developments over a certain height a designer must have a minimum qualification. Given the extensive requirements and standards, there comes a point where an enhanced skillset is required to effectively design and address the apartment design standards.⁷

Whilst there may be some practical constraints to mandating a registered architect to design all apartments, there are some alternative regulatory solutions. For example, some stakeholders suggested that design verification by a registered architect could be adopted in the Victorian context. Design verification is a process through which a registered architect is required to verify that the design objectives outlined in the relevant apartment design standards have been met prior to planning approval being granted. This process is intended to improve compliance with the design standards through ensuring that apartment designers are individually accountable.⁸

A number of stakeholders to the Inquiry supported mandating design verification in Victoria as a checkpoint in the planning process, particularly noting the benefits this would have if it occurred during the early stages of a project.⁹ The Committee received evidence which indicated that these measures promote greater compliance through ensuring oversight throughout the life of the project. For example, Dr Tom Alves supported the use of early design verification, noting:

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.¹⁰

⁶ Australian Institute of Architects, *Submission 54*, p. 23.

⁷ Maribyrnong City Council, *Submission 22*, p. 9.

⁸ See Section 3.1.2.

⁹ See, for example, Name withheld, *Submission 17*, received 28 October 2021, p. 2; Australian Institute of Architects, *Submission 54*, p. 23; City of Greater Dandenong, *Submission 10*, received 22 October 2021, p. 2; Office of the Victorian Government Architect, *Submission 16*, received 27 October 2021, p. 2; Maribyrnong City Council, *Submission 22*, p. 9; Maroondah City Council, *Submission 32*, received 29 October 2021, p. 9; Moreland City Council, *Submission 39*, received 30 October 2021, p. 10.

¹⁰ Dr Tom Alves, Head of Development, Australian Housing and Urban Research Institute, *Submission 50*, received 31 October 2021, p. 12.

Some stakeholders contended that design verification could be undertaken by either registered architects or building designers with suitable qualifications.¹¹ However, others emphasised the need for complex design projects to be assessed by registered architects only.¹² This view was informed by the minimum qualification and registration requirements for architects.¹³

As noted in Section 3.1.2, design verification has been adopted in NSW, requiring Class 2 buildings to be designed by registered architects. The NSW Compliance Declaration Scheme also requires design and building practitioners working on Class 2 buildings to register under a compliance framework.¹⁴

Stakeholders to the Inquiry were generally supportive of NSW's approach to design verification. For example, the Office of the Victorian Government Architect (OVGA) noted that NSW's approach indicates evidence that the process 'is seen to be in the best interest of the public and consumer'.¹⁵ The OVGA further highlighted the strengths of NSW's approach to ensuring compliance through regulatory controls underpinning architect registration, stating:

There are a number of stages at which they have to sign off on them, and that includes a certificate of occupancy as well, so there are a number of kind of crosschecks that happen in a regulatory environment to ensure that possibly the consumer will be better protected than they might be in Victoria, for example.¹⁶

The Committee notes that mandating design verification by a registered architect or building designer was considered during the Department of Environment, Land, Water and Planning's (DELWP) public consultation on the *Better Apartments Design Standards* (BADS) in 2016.¹⁷ At that time, there was some division amongst stakeholders on whether design verification by a registered architect would be too onerous for local councils.¹⁸ The Committee notes, however, that not all councils reflected this view in their feedback.

FINDING 59: Evidence from local government and industry highlights that further consideration should be given to design verification in Victoria, taking into account the views of local councils to determine what practice and regulatory impact this will have.

¹¹ See, for example, Maroondah City Council, *Submission 32*, p. 9.

¹² City of Greater Dandenong, *Submission 10*, p. 2; Maribyrnong City Council, *Submission 22*, p. 9; Mr David Islip, Principal Adviser, Urban Design and Architecture, Office of the Victorian Government Architect, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 47; Australian Institute of Architects, *Submission 54*, attachment 1; Name withheld, *Submission 17*, p. 2.

¹³ See, for example, Australian Institute of Architects, *Submission 54*, attachment 1.

¹⁴ NSW Fair Trading, *Becoming registered to work on class 2 buildings - Design and Building Practitioners*, <<https://www.fairtrading.nsw.gov.au/trades-and-businesses/construction-and-trade-essentials/design-and-building-practitioners/becoming-registered-to-work-on-class-2-buildings>> accessed 1 April 2022.

¹⁵ Office of the Victorian Government Architect, *Submission 16*, p. 2.

¹⁶ Mr David Islip, *Transcript of evidence*, p. 47.

¹⁷ Department of Environment, Land, Water and Planning, *Better Apartments public consultation report*, 2017, pp. 69–70.

¹⁸ Ibid.

RECOMMENDATION 26: The Department of Environment, Land, Water and Planning work with local councils to consider the benefits of design verification by registered architects in the *Better Apartments Design Standards*.

8.1.2 Design review panels

Design review panels have been widely regarded as key mechanisms to address tensions between prescriptive regulation and design innovation.¹⁹ Generally, they consist of a group of industry experts with a range of backgrounds and expertise, who are tasked with assessing development applications on behalf of local council planning authorities. The design review process is intended to provide developers and designers with impartial and independent feedback which is tailored to the individual context of the project to improve the quality of design and support innovation.²⁰

Several studies indicate that design review panels are effective in promoting greater innovation and improving the quality of built environments, particularly in the absence of a prescriptive approach to apartment design standards.²¹ The OVGA suggests that the key benefits of design review panels include:

- testing ideas with experienced experts with a variety of backgrounds
- providing the opportunity for independent peer review
- improving design outcomes
- expediting decisions and developing alternative approaches
- giving confidence to decision-makers
- ensuring there is no cost for the project team.²²

Figure 8.1 below outlines the key aims and principles for design review.

¹⁹ Mr James Legge, Director, Six Degrees Architects, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 28.

²⁰ Design Council UK, *Design review: Principles and practice*, 2019, p. 6.

²¹ See, for example, Trivess Moore, et al., 'Improving Design Outcomes in the Built Environment through Design Review Panels and Design Guidelines', paper presented at State of Australian Cities Conference 2015, 2015, p. 7; Bahar Durmaz-Drinkwater and Stephen Platt, 'Better quality built environments: design review panels as applied in Cambridge, England', *Journal of Urban Design*, vol. 24, no. 4, 2019.

²² Office of the Victorian Government Architect, *Victorian Design Review Panel*, 2021, <<https://www.ovga.vic.gov.au/victorian-design-review-panel>> accessed 15 March 2022.

Figure 8.1 Design review principles



Source: Design Council UK, *Design review: Principles and practice*, 2019, p. 7.

In Victoria, design review for major projects is currently conducted by the Victorian Design Review Panel (VDRP).²³

Design review panels are also administered by local councils. For example, in October 2021, the City of Melbourne launched a 12-month pilot program to support the Melbourne Design Review Panel.²⁴ The program establishes terms of reference,²⁵ and a code of conduct for panel members.²⁶

²³ See Section 2.1.2.

²⁴ City of Melbourne, *Melbourne Design Review Panel*, <<https://www.melbourne.vic.gov.au/building-and-development/design-excellence/Pages/design-review.aspx>> accessed 15 March 2022.

²⁵ City of Melbourne, *Melbourne Design Review Panel: Terms of Reference 2021-22: Pilot Program*.

²⁶ City of Melbourne, *Melbourne Design Review Panel: Code of Conduct*, 2021.

Whilst stakeholders to the Inquiry were broadly supportive of these existing panels, design review is voluntary and there is no mandated process that requires designs to be reviewed by a panel. Design review by the VDRP is triggered through application by the project proponent, rather than through a mandatory referral process based on measurable thresholds or factors. In this way, advice given by the VDRP and panels administered by local councils is purely advisory and has no statutory standing.²⁷

By contrast, other jurisdictions mandate referral to design review panels.²⁸ For example, the advice given by design review panels established under the *State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development* (SEPP 65) in NSW ‘has legal weight and can be relied upon by the consent authority when determining a development application or modification for apartment development under SEPP 65’.²⁹

The Committee also notes that there is currently no state-wide guidance on the administration, composition and conduct of design review panels which are administered by local councils. By contrast, as noted in Chapter 3, several other Australian jurisdictions, including New South Wales and South Australia, have adopted state-wide approaches to administering design review panels. These States provide guidance on:

- what triggers a design review to take place, including setting certain thresholds and factors for consideration
- the composition of design review panels
- panel operation, conduct and costs.³⁰

Whilst there are multiple benefits to the use of design review panels, some studies have indicated that their limitations arise from a lack of consistency in their application. For example, a paper from the State of Australia’s Cities Conference 2015 found that ‘without a more consistent approach to design review panels, both in their governance but also their assessment of proposed developments, there is the risk that the design review panels will not meet their intentions’.³¹

Some local councils submitted that they struggled to meet this consistency objective and stated that they require additional guidance and assistance in administering design review panels within their municipalities. For example, Hobsons Bay City Council stated:

Ideally there would be an ability for Councils to refer applications for design advice from a panel of suitably qualified professionals. Currently Council has to spend significant amounts of money on urban design and architectural advice in its assessment of

²⁷ David Allouf, Andrew Martel and Alan March, ‘Discretion versus prescription: Assessing the spatial impact of design regulations in apartments in Australia’, *Environment and Planning B: Urban Analytics and City Science*, vol. 47, no. 7, 2020, p. 1274.

²⁸ See Sections 3.1.2 and 3.3.2.

²⁹ NSW Department of Planning and Environment, *Apartment design guide: Tools for improving the design of residential apartment development*, 2015, p. 137.

³⁰ City of Melbourne, *API 8.13 Design Excellence Program: Design Review Processes Discussion Paper*, 2019, pp. 10–14.

³¹ Moore, et al., ‘Improving Design Outcomes in the Built Environment through Design Review Panels and Design Guidelines’, p. 7.

apartment applications. The role of the Office of the Victorian Government Architect could possibly be expanded to offer such a service to local government and other organisations for smaller scale projects.³²

Other stakeholders supported increasing the number of design review panels at different levels of governance. For example, the AIA advocated for the establishment of design review panels at different levels of geographic governance.³³

Infrastructure Victoria (IV) similarly called on the Victorian Government to partner with local councils to establish design review processes to support development in the priority locations identified in *Victoria's infrastructure strategy 2021-2051*. IV noted that this process 'could formally incorporate design considerations through early engagement with project proponents'.³⁴

The Committee considers that there is merit to the increased use of design review panels in Victoria. Noting that BADS includes complex discretionary provisions which require interpretation, the incorporation of expert advice to assess whether projects meet performance-based standards within the particular context of a project may improve the liveability of apartments for Victorians.

Whilst noting the work that DELWP and local councils have already undertaken into developing design review processes, the Committee notes that additional consideration should be given to providing clearer guidance to local councils on how to administer panels more consistently. Such guidance should provide councils with clearly defined advice on when a project should be reviewed by the panel and under what circumstances.

FINDING 60: Design review panels are effective tools to improve compliance with performance-based apartment design standards, whilst also supporting design innovation.

FINDING 61: Some local councils are struggling to effectively administer design review panels to assess projects within their municipalities.

RECOMMENDATION 27: The Department of Environment, Land, Water and Planning investigate the development of a state-wide framework for local councils to administer design review panels, including guidance on what triggers a design review to take place, the composition of panels, and panel operation, conduct and costs.

³² Hobsons Bay City Council, *Submission 31*, received 29 October 2021, p. 6.

³³ Australian Institute of Architects, *Submission 54*, p. 19.

³⁴ Infrastructure Victoria, *Submission 7*, received 20 October 2021, p. 2.

RECOMMENDATION 28: The Victorian Government implement legislative approaches to mandate the referral of apartment designs to design review panels to ensure that advice given by panels holds legal weight for enforcement.

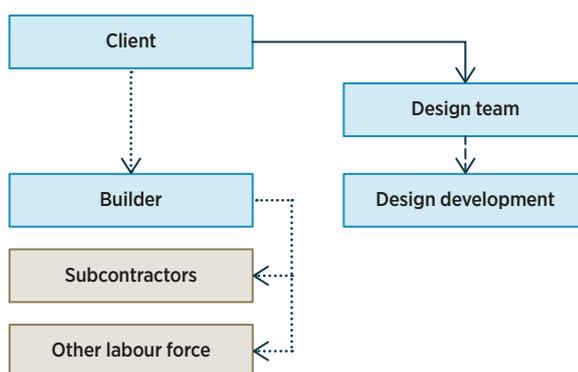
8.1.3 Procurement arrangements

The dominant procurement models for apartment developments present another key challenge to the compliance and enforcement of the current apartment design standards. In Victoria, procurement models for large-scale apartment developments are underpinned by the use of Design, Novate and Construct (DNC) contracts.³⁵ The use of this model is widespread across both industry and government, with the OVGA publishing guidance for government procurement under this model.³⁶

DNC contracts differ from traditional procurement models as they enable the ‘novation’ of projects from the client (usually the developer or owner) to the contractor/builder. This has the effect of transferring contractual obligations of design teams to the contractor, rather than the client. In this regard, the ultimate responsibility for design at the later stages of the project shifts to the contractor.³⁷ Through shifting design responsibility during the construction phase to the contractor, DNC contracts are intended to maximise innovation across both design and construction, and allow for optimised time, cost and quality.³⁸

Figures 8.2 and 8.3 below demonstrate the key actors in DNC contract models and their relationships throughout the design and novation stages of a project.

Figure 8.2 Design, Novate and Construct contract arrangements



Source: Adapted from Office of the Victorian Government Architect, *Government as ‘smart client’ - Chapter 5 Procurement of buildings and infrastructure*, 2021, <<https://www.ovga.vic.gov.au/chapter-5-procurement-buildings-and-infrastructure>> accessed 15 March 2022.

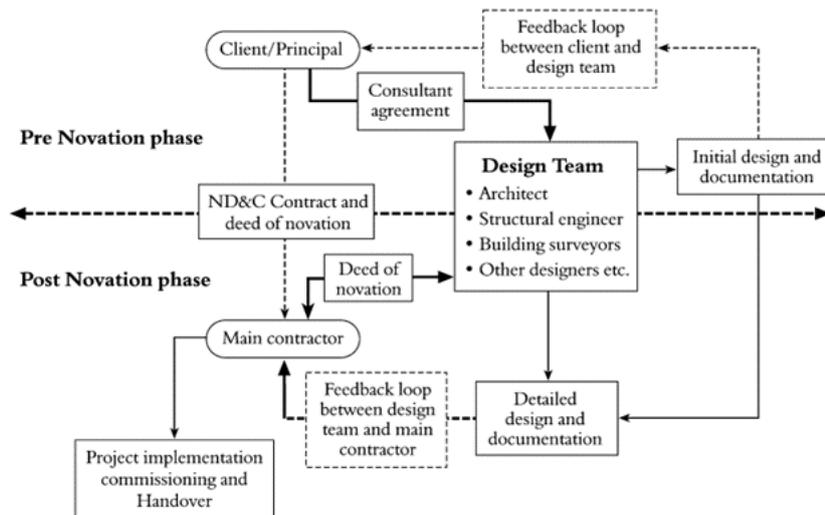
³⁵ Dr Paulo Vaz Serra, Mr Steven Richardson and Dr Andrew Martel, *Submission 45*, p. 3.

³⁶ See Office of the Victorian Government Architect, *Government as ‘smart client’ - Chapter 5 Procurement of buildings and infrastructure*, 2021, <<https://www.ovga.vic.gov.au/chapter-5-procurement-buildings-and-infrastructure>> accessed 15 March 2022.

³⁷ Hemanta Doloi, ‘Analysing the novated design and construct contract from the client’s, design team’s and contractor’s perspectives’, *Construction Management and Economics*, vol. 26, no. 11, 2008, p. 1186.

³⁸ *Ibid.*, p. 1183.

Figure 8.3 Design, Novate and Construct contract process



Source: Hemanta Doloi, 'Analysing the novated design and construct contract from the client's, design team's and contractor's perspectives', *Construction Management and Economics*, vol. 26, no. 11, 2008, p. 1182.

While there are some benefits to DNC contract models, there are also some challenges which impact on the liveability of final apartment designs. *Building Confidence*, a 2018 report commissioned by the Building Ministers' Forum, observed some key challenges to DNC contract models.³⁹ In particular, the report noted that in many circumstances there are insufficient controls over the process and, as a result, 'there is often a significant difference between the as-designed building documentation and the as-built building'.⁴⁰

Several stakeholders to the Inquiry similarly critiqued the use of DNC contracts within the building and construction industry.⁴¹ For example, AIA argued:

While the model addresses some of the financial risks for financiers and developers by engaging the contractor early once planning approval has been gained, the value management process can lead to substantial loss of design intent.⁴²

Academics from the Construction Program of the Faculty of Architecture, Building, and Planning at the University of Melbourne echoed this claim. They noted that the procurement model enables contractors to subdelegate their functions to subcontractors and that the quality of apartments is negatively impacted by the lack of experience and training proficiency of all parties to these contracts.⁴³

³⁹ This report is widely known as the Shergold Weir Report. See Peter Shergold and Bronwyn Weir, *Building Confidence: Improving the effectiveness of compliance and enforcement systems for the building and construction industry across Australia*, 2018.

⁴⁰ *Ibid.*, p. 10.

⁴¹ See, for example, Project HOME, *Submission 43*, received 31 October 2021, pp. 6–7; Dr Paulo Vaz Serra, Mr Steven Richardson and Dr Andrew Martel, *Submission 45*, pp. 3–4; Australian Institute of Architects, *Submission 54*, pp. 24–25.

⁴² Australian Institute of Architects, *Submission 54*, p. 25.

⁴³ Dr Paulo Vaz Serra, Mr Steven Richardson and Dr Andrew Martel, *Submission 45*, pp. 3–4.

As noted above, the OVGA produces guidance for government on DNC contracts. However, the Committee understands that there is currently no government-produced guidance for industry stakeholders, though some industry bodies have produced their own guidance.⁴⁴ In evidence to the Committee, the Victorian Building Authority (VBA) stated that it has raised the lack of guidance during ongoing reviews of the *Building Act 1993* (Building Act) by the Building Reform Expert Panel.⁴⁵ With respect to this guidance, the VBA told the Committee that ‘there is a need to ensure that all the stakeholders across that life cycle of a building do have accountabilities and they are able to be held to account’.⁴⁶

The University of Melbourne academics similarly critiqued the lack of individual accountability within the construction industry, noting that this impacts on the quality of apartments and apartment building projects:

there is a real lack of accountability for quality sitting specifically with individuals within firms who are responsible for making decisions and signing off where the contract obligations have been carried out sufficiently. Self-regulation is the norm in that sense, and there is little accountability around the performance of a company and the ability of its employees to hold their licences and their accreditation to build. If a problem happens with quality, defects et cetera, that does not in any way mean that your licence is going to be suspended. So there is no accountability that rests within individuals in the firm, and that is a very different situation, we would point out, to the situation around safety on site, where personal accountability is legislated and is backed up by enforceable penalties through WorkSafe and other things. That is personalised, but quality is not.⁴⁷

Accordingly, academics from the University of Melbourne recommended ‘a legislative approach backed up by an independent Authority with powers of inspection, enforcement and penalty to individuals, similar to the current framework around workplace health and safety should be considered’.⁴⁸

In the Committee’s view, additional guidance and training on novation would aid all actors throughout the design process to understand their obligations and the impacts of their decision-making on the long-term liveability of apartments. In this regard, the Committee supports increasing education and training across the industry on the procurement models which support apartment developments.

The Committee also considers that increasing individual accountability within the industry is another important step to improving the ultimate quality of apartments. Accordingly, legislative solutions should be considered by the Government. The

⁴⁴ See, for example, Australian Institute of Architects, *Code of Novation*, 2022, <https://www.architecture.com.au/archives/news_media_articles/code-of-novation> accessed 6 April 2022.

⁴⁵ Dr Todd Bentley, Chief Risk Officer, Victorian Building Authority, Public hearing, Melbourne, 16 February 2022, *Transcript of evidence*, p. 24.

⁴⁶ Ibid.

⁴⁷ Dr Andrew Martel, Faculty of Architecture, Building, and Planning, University of Melbourne, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 24.

⁴⁸ Dr Paulo Vaz Serra, Mr Steven Richardson and Dr Andrew Martel, *Submission 45*, p. 8.

Committee suggests that the Building Reform Expert Panel’s ongoing review of the Building Act may be best placed to examine this issue further.

The issue of building defects is further discussed in Section 6.10.2 in this report, and Section 3.1.2 as it applies in the NSW context.

FINDING 62: Design, Novate and Construct contracts may have negative impacts on the quality of apartments and warrant further investigation

RECOMMENDATION 29: The Department of Environment, Land, Water and Planning investigate options for improving guidance around procurement models for apartment developments.

8.2 Innovation

As noted in Section 2.3, the balance between prescriptive apartment design standards and innovation is a contentious issue. The Committee considers that encouraging innovation and design beyond the minimum standards set out in BADS and the *Apartment Design Guidelines* should be a priority in redressing this tension. This section outlines options for promoting innovative solutions to apartment design which encourage liveability.

8.2.1 Design excellence programs

Design competitions and grant programs provide one solution to help ‘force a general raising of urban design quality by re-distributing decision-making control and enabling a broad but non-prescriptive approach to the regulation of design excellence’.⁴⁹

At present, the Committee notes that there is no specific design excellence policy within the Victoria Planning Provisions (VPPs). However, DELWP’s *Future Homes Program* included industry and student competitions which are intended to ‘produce better apartment designs that support the building of apartments that become world leaders in design, sustainability and liveability’.⁵⁰

Additionally, a number of local councils have established design excellence programs within their own municipalities to encourage innovation. These include, for example, the

⁴⁹ Gethin Davison, et al., ‘The impacts of mandatory design competitions on urban design quality in Sydney, Australia’, *Journal of Urban Design*, vol. 23, no. 2, 2018, p. 257.

⁵⁰ State Government of Victoria, *Future Homes: Melbourne’s next apartments*, 2022, <<https://www.vic.gov.au/future-homes>> accessed 1 June 2022.

City of Melbourne's *Design Excellence Program*,⁵¹ and the City of Port Phillip's *Design and Development Awards*.⁵²

By contrast, in other Australian jurisdictions, design excellence programs are integrated into the planning framework. In NSW, competitive design processes are enabled through the Local Environmental Plan framework.⁵³ Some stakeholders drew the Committee's attention to the NSW program.⁵⁴

In evidence to the Committee, the Urban Development Institute of Australia, Victorian Division (UDIA Victoria) suggested that design innovation may be encouraged through state-wide design excellence programs in Victoria.⁵⁵ UDIA Victoria argued that such programs should be established by the Victorian Government to develop best practice models for developers and designers to adopt 'to respond to relevant and emerging technical building issues'.⁵⁶ Similarly, the AIA suggested:

An important step would be to create incentives for developers to move well beyond what are minimum design standards codified in the Better Apartment Design Guidelines and the Victorian Planning Provisions ... [These] incentives could include Government grants for innovation specifically catered to placemaking, internal and external amenity, or land tax rebates relating to measured performance of achieved levels of energy efficiency.⁵⁷

Noting the experiences of local councils and other Australian jurisdictions, it appears to the Committee that design excellence programs are successful in promoting innovation and encouraging design which surpasses the minimum standards within both prescriptive and performance-based models.

The Committee acknowledges and welcomes the work undertaken by DELWP in developing the *Future Homes Program*. The Committee notes that this program is still being implemented and it is unclear what the effects will be on promoting innovation in the industry. Noting this, the Committee considers that it is imperative to assess the success of the *Future Homes Program* to monitor its future utility in the Victorian context.

FINDING 63: Design excellence programs can be effective tools to encourage the innovative design of apartments.

51 City of Melbourne, *Design Excellence Program*, <<https://participate.melbourne.vic.gov.au/design-excellence-program>> accessed 6 April 2022.

52 City of Port Phillip, *Design and Development Awards*, <<https://www.portphillip.vic.gov.au/planning-and-building/design-and-development-awards>> accessed 6 April 2022.

53 Government Architect New South Wales, *Good design and design excellence in the planning system: GANSW advisory note*, 2018.

54 See Australian Institute of Architects, *Submission 54*, p. 20; Ms Bronwen Hamilton, Design Manager and Principal Urban Designer, City of Melbourne, Public hearing, Melbourne, 15 November 2022, *Transcript of evidence*, p. 18.

55 Urban Development Institute of Australia, Victorian Division, *Submission 26*, received 29 October 2021, p. 2.

56 Urban Development Institute of Australia, Inquiry into apartment design standards hearing, response to questions on notice received 11 March 2022, p. 1.

57 Australian Institute of Architects, *Submission 54*, p. 20.

RECOMMENDATION 30: The Department of Environment, Land, Water and Planning monitor the success of the *Future Homes Program* industry and student competitions in promoting design innovation with a view to developing future state-wide apartment design innovation programs.

RECOMMENDATION 31: The Victorian Government explore options to encourage design excellence through formal arrangements.

8.3 Longevity

As noted in Chapter 1, apartment living is likely to be a long-term form of housing for Victoria's growing and densifying population. Building resilient and long-lasting housing which meets the needs of occupants over their lifetimes is a key challenge facing policymakers both nationally⁵⁸ and globally.⁵⁹ In this way, promoting the ongoing liveability of apartments and apartment buildings is a key consideration for the Committee within the scope of this Inquiry. This section addresses the state-wide issues that relate to designing for the long-term liveability of apartments.

8.3.1 Retrofitting

The majority of apartment developments across the state were built prior to the development and implementation of BADS in 2017.⁶⁰ Accordingly, whether to retrofit older apartment buildings to ensure that they comply with evolving standards must be considered within the scope of this Inquiry.⁶¹

Engineers Australia encouraged the Victorian Government to consider the 'whole life cycle' of apartments when developing apartment design policy and regulation.⁶² In this regard, the organisation noted that consideration needs to be given to both newly built apartments, in addition to retrofitting existing apartments and apartment buildings to meet changing requirements. Particularly in relation to certain safety requirements, Engineers Australia outlined that BADS does not currently address this 'life cycle', noting that there continues to be a disconnect between the original design and whole life operation of apartments.⁶³

While a number of stakeholders supported building for longevity, they pointed to the constraints of retrofitting older apartments. For example, Dr Tom Alves noted

⁵⁸ Livable Housing Australia, *Livable housing design guidelines*, 2017, p. 5.

⁵⁹ UN-Habitat, *Housing at the centre of the new urban agenda*, 2015, p. 13.

⁶⁰ See, for example, Property Council of Australia, *Submission 28*, received 29 October 2021, p. 5.

⁶¹ Australian Housing and Urban Research Institute, *Submission 49*, received 31 October 2021, p. 12.

⁶² Engineers Australia, *Submission 35*, received 29 October 2021, p. 4.

⁶³ Mr Adam Lee, Project Manager, Building Reform and Projects, Engineers Australia, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, p. 57.

that retrofitting older apartments may be difficult due to dispersed ownership.⁶⁴ The Australian Housing and Urban Research Institute (AHURI) pointed to the dispersed ownership of apartment buildings as a barrier to updating older apartments:

Particularly in the very large buildings where there is very dispersed ownership because of the existence of strata title and how those apartments are developed and marketed at the presale stage, there is often a very dispersed ownership within a building, and where that is a very large building with a very large number of apartments, that creates a lot of complexity then in terms of how that kind of retrofit can be achieved ... it does get very, very complex with these very, very large, particularly high-rise buildings where there are lots of apartments and the ownership is highly dispersed. Although there is an owners corporation that oversees the management of the building, to actually get that kind of coordinated action I imagine could be quite difficult'.⁶⁵

Some stakeholders emphasised the need to undertake post-occupancy surveys of apartment residents to understand their experiences of living in both old and new apartments.⁶⁶ The City of Melbourne suggested occupancy surveys should be conducted with:

- occupants of new apartments built under current apartment standards in the planning scheme
- occupants living in apartments built before the current apartment living standards, which may or may not comply with the current standards
- apartment managers.⁶⁷

The City of Melbourne argued that these surveys should be conducted 'with consideration of metrics of measurement for liveability including satisfaction of functionality, space, comfort, security, privacy and quality of living'.⁶⁸

While acknowledging the constraints with retrofitting older apartments to comply with emerging design standards, the Committee considers that it is important to understand the full life cycle of apartments and the experiences of residents of older apartments which do not meet the current design standards.

FINDING 64: Understanding the full life cycle of apartments and the experiences of older apartments which do not meet the current design standards is key to developing a stronger framework over the long-term life course of apartment buildings.

⁶⁴ Dr Tom Alves, *Submission 50*, p. 10.

⁶⁵ Dr Tom Alves, Head of Development, Australian Housing and Urban Research Institute, Public hearing, Melbourne, 24 November 2021, *Transcript of evidence*, p. 8.

⁶⁶ City of Melbourne, *Submission 51*, p. 3; Hobsons Bay City Council, *Submission 31*, p. 6; Name withheld, *Submission 9*, received 22 October 2021, p. 2.

⁶⁷ City of Melbourne, *Submission 51*, p. 3.

⁶⁸ *Ibid.*

RECOMMENDATION 32: The Department of Environment, Land, Water and Planning develop a system for post-occupancy surveys of apartment residents to enrich understanding of the whole life cycle of apartment buildings and develop a stronger framework and scheme of regulation over the long-term life course of apartment buildings.

8.4 Education and training

Sufficient education and training is important to ensuring awareness and comprehension of rights and obligations of all actors under BADS. This section assesses the current education and training provided to actors within the sector.

8.4.1 Local planners

Some local councils involved in the Inquiry reported a lack of resourcing and training for local planners.⁶⁹ The Council Alliance for a Sustainable Built Environment (CASBE) described the lack of resourcing and support for local planners as a ‘crisis’.⁷⁰ In evidence to the Committee, CASBE stated:

what we are hearing from councils at the moment is that we have an unprecedented crisis in the planning system, because the workload is so enormous that planning managers are unable even to find the time to recruit officers because they are lurching from critical issue to critical issue. When they do find time to employ and engage junior planners, for example, the junior planners are not staying because they are unable to get the support around them to enable them to end up in an enjoyable workplace.⁷¹

The Housing Industry Association (HIA) similarly outlined previous feedback that it has received from local councils about resources. HIA noted that the lack of adequate training may have flow-on effects on the industry:

It is also important that council planners fully understand the consequence of time delays created when attempting to work through technical and or specialist design elements with the applicant. Often due to unnecessary protracted time delays it is not uncommon for many apartment applications to go before the Victorian Civil and Administrative Tribunal for review due to councils’ failure to determine the application within the required statutory time frame or for a review of council’s decision. ... this may be able to be avoided if council planners were equipped with the appropriate skills to be able to professionally assess and determine apartment applications.⁷²

As noted in Chapter 1, apartment living is a growing trend in regional areas. Several stakeholders emphasised the challenge this presents to local planners within these

⁶⁹ See, for example, City of Greater Dandenong, *Submission 10*, p. 2.

⁷⁰ Ms Natasha Palich, Executive Officer, Council Alliance for a Sustainable Built Environment, Public hearing, Melbourne, 15 November 2022, *Transcript of evidence*, p. 5.

⁷¹ Ibid.

⁷² Housing Industry Association, *Submission 38*, received 30 October 2021, p. 1.

areas.⁷³ The Municipal Association of Victoria (MAV) noted that additional education and training for local planners is particularly important in regional areas. MAV stated:

As regional Victoria sees rapid growth and the resulting pressure for new homes and diverse housing types, regional councils report that there is increased demand for apartment development, particularly in Ballarat and Bendigo. Given these trends education and training will likely be needed for regional developers and planners who are not skilled in apartment development assessment.⁷⁴

UDIA Victoria suggested that knowledge-sharing between planners could be facilitated by industry bodies, stating that:

the government is introducing a suite of requirements but that the skill sets just are not in the suburban councils yet because they have not been exposed to this level of development ... And the BADS, particularly with the materials requirements in this latest review, are really asking planners to assess design and almost play the role of an architect, if you like. And so there was an agreement that there is a skills gap that needs to be filled. I think the industry body for planners ... would be one place that can provide support. Our industry body can provide support. There could be scope to take experienced planners from inner-city councils and relocate them temporarily. There is a range of programs to create a skill-sharing and skills development process.⁷⁵

The Committee considers that additional support must be provided to local planners to ensure that they are able to fulfill their assessment, monitoring and enforcement functions. The Committee specifically notes the need for increased capacity and skills within the enforcement space to support application of the BADS.

FINDING 65: Some local councils are not confident in fulfilling their assessment, monitoring and enforcement functions due to a lack of well trained and resourced planners.

RECOMMENDATION 33: The Department of Environment, Land, Water and Planning consider strategies to facilitate knowledge-sharing between local councils to ensure that planners across Victoria have sufficient expertise.

RECOMMENDATION 34: The Department of Environment, Land, Water and Planning develop an improved framework around monitoring and enforcement to ensure compliance with the *Better Apartments Design Standards*.

⁷³ Council Alliance for a Sustainable Built Environment, *Submission 33*, received 29 October 2021, p. 2; Dr Caroline Speed, Director of Policy and Research, Urban Development Institute of Australia Victorian Division, Public hearing, Melbourne, 15 February 2022, *Transcript of evidence*, p. 52; Municipal Association of Victoria, *Submission 27*, p. 7.

⁷⁴ Municipal Association of Victoria, *Submission 27*, p. 7.

⁷⁵ Dr Caroline Speed, *Transcript of evidence*, p. 52.

8.5 Affordability

A number of stakeholders contended that there is strong interaction between housing affordability and the liveability of apartments.⁷⁶ The majority of these stakeholders advocated for the increased availability of affordable housing. That Committee notes that the *Planning and Environment Act 1987* (Planning and Environment Act) defines affordable housing as housing, including social housing, that is appropriate to the needs of very low-, low- and moderate-income households.⁷⁷

The *Ten-Year Social and Affordable Housing Strategy for Victoria* is currently under development.⁷⁸ This strategy uses the \$5.3 billion Big Housing Build fund to bring together ‘reform and action to deliver a social and affordable housing system that is efficient, collaborative and sustainable for generations to come’.⁷⁹

Stakeholders to the Inquiry critiqued consultation drafts of the strategy, noting that it does not account for the role that the planning system can play in supporting social and affordable housing.⁸⁰

Some local councils advocated for affordable housing mechanisms to be mandated within state-level policy within the planning system.⁸¹ For example, Moreland City Council stated that the ‘current voluntary agreement system does not work’.⁸² In relation to the interaction between the liveability of apartments and housing affordability, the Council stated:

Core to the liveability of apartments is the issue of affordability to those on very low, low, and moderate incomes. Access to appropriate housing in locations close to services and social infrastructure is important, and the freedom to make choices about where you live is fundamental to creating a healthy, productive life. Victorian housing supply does not reflect the needs of the community, and this has been recognised by all levels of government.⁸³

There are diverse options for how planning system reform could support the increased supply of affordable housing with the aim of improving the liveability of Victorian apartments. For example, a number of stakeholders advocated that inclusionary zoning be mandated within the VPPs to ensure the availability of enough affordable

⁷⁶ Australian Housing and Urban Research Institute, *Submission 49*, p. 10; Hobsons Bay City Council, *Submission 31*, p. 6; Manningham Council, *Submission 36*, received 29 October 2021, p. 7; Moreland City Council, *Submission 39*, p. 6; Glen Eira City Council, *Submission 44*, received 31 October 2021, pp. 2–3.

⁷⁷ *Victorian Planning and Environment Act 1987* (Vic), s 3AA.

⁷⁸ Homes Victoria, *10-Year Strategy for Social and Affordable Housing, 2022*, <<https://www.homes.vic.gov.au/10-year-strategy-social-and-affordable-housing>> accessed 6 April 2022.

⁷⁹ Ibid.

⁸⁰ See, for example, Municipal Association of Victoria, *Submission 27*, p. 8.

⁸¹ See, for example, Manningham Council, *Submission 36*, p. 7; Hobsons Bay City Council, *Submission 31*, p. 6.

⁸² Moreland City Council, *Submission 39*, p. 8.

⁸³ Ibid., p. 6.

apartments.⁸⁴ Inclusionary zoning involves ‘program, regulation, or law that requires or provides incentives to private developers to incorporate affordable or social housing as a part of market-driven developments’.⁸⁵

There was some division amongst stakeholders as to whether to mandate state-wide planning tools to support the supply of affordable housing, or to encourage councils to pursue planning scheme amendments on a voluntary basis.

Some local councils supported the development of mandatory tools, including mandatory affordable housing contribution systems. For example, Glen Eira City Council suggested adopting a state-wide approach to inclusionary zoning:

Apartment designs standards need to be supported by a mechanism to secure different housing affordability tenures. Council submits that to achieve this is to introduce a state-wide inclusionary zoning policy and/or planning tools to allow all councils to pursue mandatory inclusionary zoning approaches through their planning schemes. A mandatory inclusionary zoning requirement could be inserted as a Particular Provision in the Victorian Planning Provisions, operating in a similar way to open space contributions or within the existing Apartment Design Standard Particular Provision.⁸⁶

By contrast, other stakeholders noted that voluntary approaches had been adopted successfully in other jurisdictions. For example, AHURI suggested that there is scope for local councils to provide affordable housing on a voluntary basis under section 173 of the *Planning and Environment Act 1987* (Vic). Reflecting on the experiences of other Australian jurisdictions, AHURI stated:

This use of voluntary agreements has in some ways mirrored the approach in NSW where voluntary and negotiated approaches have dominated (compared to places like South Australia where mandatory mechanisms have occurred). There is scope to consider other types of interventions used in places like Sydney, where affordable housing has been facilitated through inclusionary zoning, density bonuses and negotiated developer contributions. This might also mean looking at ways for the regulation to be made flexible enough to be ‘market enabling’.⁸⁷

The Committee notes that the *Ten-Year Social and Affordable Housing Strategy for Victoria* is currently under development. The Committee welcomes the development of this strategy and believes that it provides the opportunity for further consideration to be given to increasing the supply of a range of affordable housing, including affordable apartments.

⁸⁴ Bayside City Council, *Submission 25*, received 29 October 2021, p. 2; Municipal Association of Victoria, *Submission 27*, p. 8; Glen Eira City Council, *Submission 44*, p. 3; Australian Housing and Urban Research Institute, *Submission 49*, p. 11; Blackburn Village Residents Group, *Submission 46*, p. 10; Project HOME, *Submission 43*, p. 14; Yarra Ranges Council, *Submission 56*, received 3 February 2022, p. 3.

⁸⁵ The World Bank, *Inclusionary zoning*, <<https://urban-regeneration.worldbank.org/node/46>> accessed 6 April 2022.

⁸⁶ Glen Eira City Council, *Submission 44*, p. 3.

⁸⁷ Australian Housing and Urban Research Institute, *Submission 49*, p. 12 (with sources).

FINDING 66: Housing affordability, alongside cost pressures, is an issue affecting the liveability of apartments in Victoria.

RECOMMENDATION 35: The Victorian Government consider how planning system reform could support the supply of more affordable apartments in Victoria.

**Adopted by the Legislative Assembly Environment and Planning Committee
Parliament House, Spring Street, East Melbourne
22 June 2022**

Appendix A

About the Inquiry

A.1 Submissions

Number	Author
1	Name withheld
2	Ms Jane Brownrigg
3	Ms Margaret Byron
4	Ms Melissa Greely
5	Ms Jane Westney
6	Name withheld
7	Infrastructure Victoria
8	Darebin Appropriate Development Association
9	Name withheld
10	City of Greater Dandenong
11	City of Port Phillip
12	Ms Mary R. Kelleher
13	Ms Kirsty Ellem
14	Whitehorse Ratepayers and Residents Association
15	Victorian Planning Authority
16	Office of the Victorian Government Architect
17	Name withheld
18	Frankston City Council
19	Confidential
20	Department of Environment, Land, Water and Planning (DELWP)
21	Name withheld
22	Maribyrnong City Council
23	Victorian Building Authority
24	Knox City Council
25	Bayside City Council
26	Urban Development Institute of Australia, Victorian Division (UDIA Victoria)
27	Municipal Association of Victoria
28	Property Council of Australia
29	Monash City Council

Number	Author
30	City of Yarra
31	Hobsons Bay City Council
32	Maroondah City Council
33	Council Alliance for a Sustainable Built Environment (CASBE)
34	Visionary Design Development
35	Engineers Australia
36	Manningham Council
37	Moonee Valley City Council
38	Housing Industry Association
39	Moreland City Council
40	Darebin City Council
41	Flemington Association
42	Mr Stan Capp
43	Project HOME
44	Glen Eira City Council
45	Dr Paulo Vaz Serra, Mr Steven Richardson, and Dr Andrew Martel
46	Blackburn Village Residents Group
47	Ignite
48	City of Greater Bendigo
49	Australian Housing and Urban Research Institute (AHURI)
50	Dr Tom Alves
51	City of Melbourne
52	Strata Community Association
53	Urban Design Forum Australia
54	Australian Institute of Architects
55	Mornington Peninsula Shire Council
56	Yarra Ranges Council
57	Mr John Boddington
58	Commissioner for Senior Victorians

A.2 Public hearings

Wednesday 24 November, Melbourne

Name	Title	Organisation
Dr Tom Alves	Head of Development	Australian Housing and Urban Research Institute (AHURI)
Ms Arianna Garay	Research Member	Ignite
Mr Derek Huynh	Research Member	Ignite
Ms Divya Sri Sunkara	Research Member	Ignite
Dr Paulo Vaz Serra	-	Faculty of Architecture, Building, and Planning, University of Melbourne
Mr Steven Richardson	-	Faculty of Architecture, Building, and Planning, University of Melbourne
Dr Andrew Martel	-	Faculty of Architecture, Building, and Planning, University of Melbourne
Professor Ralph Horne	-	Project HOME, Centre for Urban Research, School of Global, Urban and Social Studies, RMIT University
Dr Andrew Martel	-	Project HOME, Centre for Urban Research, School of Global, Urban and Social Studies, RMIT University
Dr Louise Dorignon	-	Project HOME, Centre for Urban Research, School of Global, Urban and Social Studies, RMIT University
Dr Nicola Willand	-	Project HOME, Centre for Urban Research, School of Global, Urban and Social Studies, RMIT University
Dr Megan Nethercote	-	Project HOME, Centre for Urban Research, School of Global, Urban and Social Studies, RMIT University
Ms Maria Poletti	President	Darebin Appropriate Development Association
Mr Chris Erlandsen	Vice-President	Darebin Appropriate Development Association
Ms Tanya Tescher	President	Whitehorse Ratepayers and Residents Association

Tuesday 15 February, Melbourne

Name	Title	Organisation
Mr James McLean	Senior Policy Adviser, Natural and Built Environment	Municipal Association of Victoria
Ms Natasha Palich	Executive Officer	CASBE (Council Alliance for Sustainable Built Environment)
Ms Bronwen Hamilton	Design Manager and Principal Urban Designer	City of Melbourne
Ms Lavanya Arulanandam	Senior Urban Designer	City of Melbourne
Ms Amy Hodgen	Senior Coordinator, Statutory Planning	City of Yarra
Ms Rachel Ollivier	General Manager, City Sustainability and Strategy	City of Darebin
Mr Munir Vahanvati	City Designer, City Development	City of Darebin
Ms Karen Bayly	Principal Strategic Planner	City of Moreland
Mr Roger Cooper	Senior Planning Adviser	Housing Industry Association (HIA)
Mr Mike Hermon	Executive Director, Planning and Development	Housing Industry Association (HIA)
Ms Danni Hunter	Victorian Executive Director	Property Council of Australia
Mr Andrew Lowcock	Victorian Policy Manager	Property Council of Australia
Mr Daniel Dugina	General Manager Operations, Apartments, Development, Lendlease	Property Council of Australia
Mr Matthew Kandelaars	Chief Executive Officer	Urban Development Institute of Australia (UDIA) (Victoria Division)
Dr Caroline Speed	Director of Policy and Research	Urban Development Institute of Australia (UDIA) (Victoria Division)
Mr Ashley Williams	Board Member	Urban Development Institute of Australia (UDIA) (Victoria Division)
Ms Alesha Printz	General Manager, Victorian Division	Engineers Australia
Mr Baoying Tong	Senior Manager, Building Reform and Projects	Engineers Australia
Mr Adam Lee	Project Manager, Building Reform and Projects	Engineers Australia

Wednesday 16 February, Melbourne

Name	Title	Organisation
Dr Jonathan Spear	Acting Chief Executive Officer	Infrastructure Victoria
Dr Kath Phelan	Principal Planner	Infrastructure Victoria
Mr Peter Kartsidimas	Director, Networks and Planning	Infrastructure Victoria
Ms Rachel Dapiran	Executive Director, Infrastructure, Strategy and Planning	Victorian Planning Authority
Ms Goksel Karpal	Urban Design Advisor	Victorian Planning Authority
Dr Todd Bentley	Chief Risk Officer	Victorian Building Authority
Ms Shobini Mahendra	Chief Analyst, Research and Review	Victorian Building Authority
Mr Matthew Waters	Senior Manager, Technical and Regulation	Victorian Building Authority
Mr Paul Zanatta	National Advocacy and Policy Manager	Australian Institute of Architects
Mr Tim Leslie	Victorian State Manager	Australian Institute of Architects
Mr Bill Krotiris	Victorian President, Australian Institute of Architects Principal, John Wardle Architects	Australian Institute of Architects
Ms Sarah Buckeridge	Co-managing Director, Hayball	Australian Institute of Architects
Mr James Legge	Director, Six Degrees Architects	Australian Institute of Architects
Mr David Islip	Principal Adviser, Urban Design and Architecture	Office of the Victorian Government Architect
Mr Julian Lyngcoln	Deputy Secretary, Planning	Department of Environment, Land, Water and Planning (DELWP)
Mr Andrew Gear	Executive Director, Planning Implementation and Heritage	Department of Environment, Land, Water and Planning (DELWP)
Dr Trevor Pisciotta	Executive Director, Building	Department of Environment, Land, Water and Planning (DELWP)
Ms Amy Mak	Manager Future Homes	Department of Environment, Land, Water and Planning (DELWP)

A.3 Site visits

Friday 1 April 2022

Elwood House, 2 Pine Ave, Elwood

Hawke and King, 643 King St, West Melbourne

Nightingale 2.0, 30 Railway Place, Fairfield

Garden Apartments at Burwood Brickworks, Foundation Boulevard, Burwood East

Appendix B

National Construction Code

3.8.4.2 Natural light

Natural light must be provided to all *habitable rooms*, in accordance with the following:

- (a) Natural light must be provided by—
 - (i) *windows*, excluding *roof lights* that—
 - (A) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 10% of the *floor area* of the room; and
 - (B) are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or
 - (ii) *roof lights* that—
 - (A) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 3% of the *floor area* of the room; and
 - (B) are open to the sky; or
 - (iii) a proportional combination of *windows* and *roof lights required* by (i) and (ii).

