SUBMISSION ON APARTMENT DESIGN STANDARDS

VICTORIAN PARLIAMENT LEGISLATIVE ASSEMBLY
ENVIRONMENT AND PLANNING COMMITTEE

Submission issued November 2021
VICTORIA PARLIAMENTARY INQUIRY INTO
APARTMENT DESIGN STANDARDS

Australian Institute of Architects

ABOUT THE INSTITUTE

The Australian Institute of Architects (Institute) is the peak body for the architectural profession in Australia. It is an independent, national member organisation with around 12,000 members across Australia and overseas.

The Institute exists to advance the interests of members, their professional standards and contemporary practice, and expand and advocate the value of architects and architecture to the sustainable growth of our communities, economy and culture.
The Institute actively works to maintain and improve the quality of our built environment by promoting better, responsible and environmental design.

PURPOSE

- This submission is made by the Australian Institute of Architects (the Institute) in response to the Victorian Parliament's Legislative Assembly Environment and Planning Committee's Inquiry into Apartment Design Standards.
- At the time of this submission the National President is Tony Giannone FRAIA.
- The Chief Executive Officer is Julia Cambage.
- The Victorian Chapter President is Bill Krotiris RAIA.
- The Victorian State Manager is Tim Leslie FRAIA.

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1 INTRODUCTION

1.1 About the Institute and the Architecture profession

The Australian Institute of Architects (the Institute) is the peak body for the architectural profession in Australia, representing around 12,000 members. The Institute works to improve our built environment by promoting quality, responsible, sustainable design. Architecture influences all aspects of the built environment and brings together the arts, environmental awareness, sciences and technology.

By combining creative design with technical knowledge, architects create the physical environment in which people live, which in turn, influences quality of life. Through its members, the Institute plays a major role in shaping Australia's future.

Architects are a key component of Australia's $178 billion building construction sector[1] and there are around 13,000 architectural businesses in Australia with more than 43,000 employees. Approximately 25,000 people in the labour force hold architectural qualifications (bachelor's degree or higher) and architectural services in Australia in 2021 had revenue of $7 billion[2]

Australian architects have a worldwide reputation for creative and innovative design leadership and Australia is known for producing contemporary and breakthrough architecture. We have a well-recognised, high quality and liveable built environment. To maintain this into the future and support our burgeoning population in both urban and regional centres, we must create buildings and public spaces that are environmentally, economically and socially sustainable and culturally rich.

1.2 This context of this submission

The Institute welcomes the opportunity to make a submission to the Victorian Parliament – Legislative Assembly Environment and Planning Committee's Inquiry (into Apartment Design Standards.

This past twenty-two months has presented the challenge of the Covid-19 pandemic which has had different impacts across the world and between cities and regions across Australia. It has also seen the delivery of a Royal Commission into National Natural Disaster Arrangements.

[1] Combined housing, multi-unit apartments and townhouses, commercial and industrial and institutional building construction as noted in Construction in Australia sourced from: https://www.ibisworld.com/au/construction-sector/

[2] Architectural Services in Australia - Market Research Report updated August 2nd 2021 sourced from https://www.ibisworld.com/au/industry/architectural-services/550/

As one of its key policy priorities, the Institute promotes action on climate change and the promotion of a sustainable built environment. The Institute places a very high value on action to reduce the impacts of climate change. In 2020 the Institute invited all of its 12,000 members in Australia (and our International Chapter) to take an ambitious step of commitment to a zero-carbon journey[3]. We note that:

- Australia's buildings generate 23 per cent of Australia's carbon emissions.
- Australia's building sector can deliver up to 28% of Australia's 2030 emissions reduction target.
- Architects are uniquely placed to help lead the transition to a carbon neutral future.

The Institute through the work of its Climate Action and Sustainability Taskforce has called on the Australian Government to establish a national plan towards zero carbon buildings by 2030 that can be supported and led where appropriate by state and local government.

The Australian Institute of Architects is pleased to see the many initiatives of the Victorian Government that are already underway and will help create better natural and built environments for all Victorians well into the future. Examples include:

- Environmentally Sustainable Development Roadmap
- A range of Cooling and Greening Melbourne projects
- A review of Victoria's 30-year infrastructure plan
- Planning for Melbourne's Green Wedges and Agricultural Land
- Built Environment Climate Change Adaptation Action Plans.
- Victoria's Gas Substitution Roadmap
- Victoria's Building System Review
- Better Apartment Design Standards 2021

One of the responses that are needed by Australian cities to reduce climate change and improve liveability is to limit urban sprawl. The Institute notes that the Victorian Department of Environment Land, Water and Planning (DELWP) is seeking to limit urban sprawl and continued encroachment of urban growth on both agricultural and green space in its planning for Melbourne's Green Wedges and Agricultural Land.

Limiting urban sprawl and creating less car dependent lifestyles in 20-minute neighbourhoods, supported by urban and suburban public transport, requires a city and metropolis shaping strategy accompanied by much higher levels of density within existing developed area. The future of Melbourne, as with other cities in Australia and overseas, could be one where living in apartments becomes the 'new normal' and no longer the exception. For many of us, Apartments are our new homes. With continually accelerating land prices, apartment dwelling may also form part of the solution set to

[3] https://www.architecture.com.au/about/carbonneutral Melbourne is a city of inclusive, vibrant and healthy neighbourhoods

increase housing affordability and, in some ways, address one of our greatest current challenges, homelessness.

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.

The Institute notes that the Victorian Legislative Assembly Environment and Planning 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 main purpose of this submission is not to provide specific prescriptions on design standards, but to provide insight into the way current Apartment Design Standards are actually operating and how to improve the design of built outcomes and quality of health and wellbeing offered through built outcomes as a result of these Standards. The primary objective should be to improve the "liveability" of all apartment buildings.

1.3 Key Recommendations.

Key recommendations that we make to the Environment and Planning Committee are:

Recommendation 1. The Victorian Government articulates a clear vision about apartments as a mainstream housing choice, particularly for families with dependent children and how it will influence the housing supply market to deliver this as a high quality and affordable housing choice for households across a broad social and economic spectrum. This vision should articulate:

- Apartments first and foremost as housing – "people's homes", as against an asset class or investment.
- Consumer protections including for residential tenants of apartments to ensure long term tenure for families thereby helping to create stable inclusive communities within apartment complexes.
- How to create liveable, sustainable, and inclusive communities of people who live in apartments with respect to all types of households and at all aged and stages of people's lives.
- How to improve affordability of liveable apartments.

Recommendation 2. Planners pay greater attention to developing well designed master plans and planning controls such as Melbourne City Council's Amendment C308 for the Central City and Southbank so that apartment complexes are designed, approved and built with respect to the local context, and not just as a building on a site.

Recommendation 3. A more comprehensive appraisal of proposed apartments designs is undertaken using Design Review Panels to ensure that all apartments are contributing to housing stock that meets the need of end users in respect of indoor and outdoor space. There should be a particular focus on ensuring that there is an adequate supply of apartments with sufficient outdoor (and indoor) space for people living with disabilities who have high physical support needs and rely on a wheelchair for their personal mobility.

Recommendation 4. The Victorian Government develops and promotes much higher standards for accessibility in apartments and apartment complexes that go beyond the National Construction Code and the current standards set out in the Apartment Design Guidelines. Reference standards include Accessibility Standard AS1428.1, Adaptability Standard AS4299 and the Gold and Platinum Standards of the Liveable Housing Design Guidelines. It is critical that the access standards consider all areas of the complex.

Recommendation 5. The Victorian Government undertakes a review to develop a stronger framework and scheme of regulation to ensure that householders' long-term interests are protected over the long-term life course of apartment buildings by provide robust government regulatory oversight for long term maintenance. This should be supported by the introduction of electronic building manuals.

Recommendation 6.1 Develop further sustainability guidelines for apartments that:

- establishes a 2030 target for apartments to be designed and constructed for zero-carbon operation and provides specific guidance for sustainable building design and construction practice which addresses issues of:
    - embodied carbon and energy of materials
    - life cycle assessment of materials
    - disclosure of materials' composition
    - Impact of the building in its local context
- supply chain responsibility for building materials in relation to broader social and economic outcomes such as the eradication of enforced labour.

Recommendation 6.2 Develop and implement policy strategies to 'decarbonise' existing apartment buildings and upgrade existing older building stock as a low carbon sustainable option.

Recommendation 7. Develop a more holistic regulatory framework for the Apartment Design Guidelines through a more succinct and focussed regulatory instrument than the Victorian Planning Provisions – similar to the NSW SEPP 65, but also noting the

development of the NSW Designing in Place SEPP. In particular, consideration should be given to establishing a statewide framework and regulatory scheme for design review panels.

Recommendation 8. The Victorian Government adopts the recommendations of the joint statement by the Australian Institute of Architects, the Association for Consulting Architects (ACA) and the Association of Architectural Schools of Australasia (AASA) in response to the National Registration Framework for Building Practitioners.

Recommendation 9. The Victorian Government give greater guidance to procurement methods so that the intentions of department designs, including designs approved design review panels, and pursuing design excellence are enabled to be fully realised and deliver high quality, liveable, sustainable and affordable apartments. This is to be supported by using the Code of Novation (for novated design and construct procurement) soon to be published by the Australian Institute of Architects.

2 THE INSTITUTE'S VIEWS ABOUT IMPROVING APARTMENT DESIGN STANDARDS

2.1 The challenge of achieving an apartment design vision.

What is the apartments vision?

The Institute notes the positive contribution being made through the successive iterations of the Better Apartment Design Standards. However, Apartment Design Standards on their own cannot take Victorians living in urban and suburban settings towards any mainstream or wholesale uptake of apartments as a pro-active lifestyle choice, and as a viable alternative to a '*house on land*' home

While the apartment market is slowly maturing, apartment dwelling is still not a major aspiration for families, with dependent children but rather single people, couples, and other cohabitating adults.

Single, two parent and other families with dependent children comprised 44.5% of Victorian households in the 2016 census[4].

Victoria is a long way from seeing a large proportion of people who will live their entire lives in apartments as in many other densified cities in the world

For many, apartments are the residual choice option as a consequence of not being able to afford to buy or rent detached or semi -detached dwellings or townhouses.

This raises the serious question of how both supply and demand can be incentivised to achieve an outcome of more families with dependent children residing in apartments

[4] 2021 Census data for Victoria still pending. 2016 data used. Calculated as the product of 70.8% of all households being Families – of these 46.3% were couples with children, 15.3% were one parent families and 1.8% were "other families". The remainder (36.5%) were couples without children. Source: https://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/2?opendocument

comfortably and as a predominant choice within their community for their established household.

The Victorian Government and the Victorian community need to ask "what is an acceptable living standard" not only with respect to an individual apartment dwelling, but an apartment complex as a whole with complete amenity offering, and an apartment complex within a neighbourhood or precinct. A neighbourhood or precinct also sits in a broader urban context of the other land uses and amenity – which is currently being guided by the six Land Use Framework Plans of Melbourne's Future Planning Framework.

If the vision the Victorian Government holds, is one where in 10 or 15 years' time a large proportion of middle-income households including families with dependent children will seek to live in apartments, then there will need to be substantial changes, not only to the apartment design standards, but also more fundamental planning considerations and land-use decisions.

In more mature markets where there is a healthy surplus of quality apartments relative to demand, market pressures can assist the delivery of quality through competition. At present, in the Victorian housing market, there is a shortage of housing that is both of an acceptable quality and affordable for many Victorian households, whether to purchase or to rent.

At the same time Australia and Victoria are noted to have unusually low rates of public rental housing relative to other developed economies such as member nations of the OECD and there is largely an absence of any form of competitive pressure on the private rental markets due to public housing now being very much a residual market – housing of last resort for people with complex needs and vulnerabilities.

Recommendation 1. The Victorian Government articulates a clear vision about apartments as a mainstream housing choice, particularly for families with dependent children and how it will influence the housing supply market to deliver this as a high quality and affordable housing choice for households across a broad social and economic spectrum. This vision should articulate:

- Apartments first and foremost as housing – "people's homes", as against an asset class or investment.
- Consumer protections including for residential tenants of apartments to ensure long term tenure for families thereby helping to create stable inclusive communities within apartment complexes.
- How to create liveable, sustainable and inclusive communities of people who live in apartments with respect to all types of households and at all aged and stages of people's lives.
- How to improve affordability of liveable apartments.

2.2 Common design challenges.

Within the Victorian Chapter of the Institute, we have discussed these issues intensively. The judgement of members is that the current provisions lift the minimum standard.

However, this leaves the question of what provides an incentive to go beyond a "minimum standards" approach and to address design issues or challenges.

2.2.1 Buildings in their context.

The design of apartments requires greater attention to the setting of the apartment building. For example, the Apartment Design Guidelines, seek to ensure that there is adequate access to light and ventilation. However this tends to focus on the individual dwelling and the apartment complex itself. Greater attention to overall precinct planning at the local government level (and the forthcoming Land Use Framework Plans) needs to ensure that the distribution of apartment complexes considering the density of buildings, their height, street setbacks and building separations relative to each other as these directly impact on light and ventilation.

By attending to these issues, there will be fewer constraints that need to be compensated when dwellings and the apartment complex are challenged by overshadowing that adversely impacts access to natural light in apartments, rooftop gardens, other communal areas and solar panels, as well as reflected glare, privacy and ventilation. In addition, as the new draft guidelines also consider – the issue of wind tunnelling and vortexes when wind is forced between adjacent buildings is a consequence of precinct planning.

An apartment building's presence and impact in the neighbourhood.

This aspect of design is critical in the urban and suburban context. In more dense suburban and urban settings, design cannot simply be evaluated in terms of the building itself. It is imperative that a 'placemaking' lens is applied to buildings. It is commendable that the 2021 Better Apartment Design Standards seeks to address some of these issues. For example, there is now a new requirement for wind engineers' appraisal and testing of designs over five storeys.

Other important aspects of design that contribute to placemaking include:

- Height (wind, shading, sightlines, visual presence, heat island impacts).
- Relationship and massing of buildings in a given neighbourhood or precinct.
- Contribution to publicly accessible open space (as well as local government set aside greenspaces in comfortable walking distance).
- Streetscape – particularly at, but not limited to the ground level.
- Safety of movement at entrance/within /around development.
- Street level activation. For example, there is very poor street activation when an apartment building has one or more or more storeys of carpark at ground level that forms a major part of the apartment frontage to the streets rather than retail, community or gardens, or even ground level dwellings with appropriate setbacks, visual interface and privacy. Podium carparks essentially form the base/footing of a building establishing a street wall for parking vehicles, a building requirement that is becoming obsolete with the growing improvements for shared transport and improved public transport.

Recommendation 2. Planners pay greater attention to developing well designed master plans and planning controls such as Melbourne City Council's Amendment C308 for the

Central City and Southbank so that apartment complexes are designed, approved and built with respect to the local context, and not just as a building on a site.

2.2.2 Space.

It is noted that the draft Apartment Design Guidelines do not prescribe minimum apartment sizes. There are different views as to whether there should be a prescribed minimum space for dwellings. Space should not just take into account the floor area of the dwelling but also its height, which also determines the amenity quality of space in terms of total volume. The perception of, or feeling that one is in, a sufficiently spacious dwelling is determined by all of its three-dimensional characteristics.

Good design will help to maximise this perception of spaciousness, together with benefits in terms of light, ventilation and practical amenity such as:

- trafficable space,
- seating,
- meals-areas,
- sleeping areas,
- functional surfaces and spaces such as those used/ found in
    - kitchens,
    - laundries,
    - home study/ workspaces,
    - creative activity spaces,
    - television viewing,
    - floor level play,
    - relaxation areas, and
    - storage.

The design guidelines attempt to address these needs through providing minimum room sizes in two dimensions (i.e. the floor plan dimensions). However good design may ensure that a 60m sq apartment functions better may be perceived to be more spacious, liveable and comfortable than a poorly designed 70m sq apartment. This may be particularly where the 60m sq apartment has the generosity of 3.0 metres ceiling height as compared to conventional and mainstream heights of 2.7 metres. Notwithstanding this, the qualitative aspects of good design are difficult to codify and there is an important role for Design Review Panels considered further below.

2.2.3 Private outdoor space.

The draft Apartment Design Guidelines also attempt to increase flexibility in relation to private outdoor space. We note that the new draft Table B8 for Clause 58.05, *Outdoors private space* contains identical provisions for non-north or non-south facing apartments but an allowance for slightly reduced depth for north and south facing balconies. Outdoor space is important. However, the Apartment Design Guidelines make no provision for specifications on a corner balcony.

The partial treatment of design through two-dimensional specification provided in Table B8 does not consider whether any of the outdoor space might be brought inside (added to) the indoor living space. For some owner occupiers it may be preferable, for example if the

living room window comprised a folding window that filled the full width and height of the living room wall (or the full width of the balcony) and the balcony was fully projecting rather than recessed. When such a window is fully open there would be little difference between this and a recessed balcony.

Another design response is a Juliet balcony where the balustrade is connected to the building facade without a deck to walk on, in front of double doors, that can bring light and ventilation indoors and offset the losses of a balcony. In a southern orientation where shading is less of an issue this design can also bring more light and passive warmth during the non-summer months as the window of the living space is at the building façade (hence closer to "southern sky-light") without the shading of a recessed balcony or balconies overhead. Wider width of apartments to the South (as compared to North sun facing apartments) also go a long way to improve the south quality of light entering into the apartment floor space.

This is not so much to make a specific case for reducing balcony dimensions, but rather to illustrate that good design really needs to take account of far more than two-dimensional measures and the need for a much more-in depth appreciation of how space works.

A flexible approach to space may also help to ensure that apartments can be designed and built in ways that are responsive to a wide range of households. With expensive land and developers aiming to maximise returns, and a design standard that continues to permit inadequately sized apartments, the balance of affordability versus indoor and outdoor spatial amenity for the benefit of households is difficult to achieve.

Setting rigid specifications for balconies below 40 metre height buildings may mean that in the colder seasons of the year, the balcony provides little benefit to the apartment's occupants. Providing the flexibility and choice for purchasers to bring some of the outdoor space indoors can provide greater benefit in terms of liveability by increasing indoor living space of benefit for a greater part of the year - especially in a cooler temperate climate experienced in much of Victoria. The pandemic crisis further underscores the importance of adequate indoor space with households working for months (and well over a year in some occupations and sectors) from home over cooler months.

The draft Apartment Design Guidelines for Victoria[5] suggest winter gardens (the enclosure of an external private open space with glazing) as a design response to exterior sources of noise. However, if the utility of the outdoor space is generally compromised by such noise, then occupants may enjoy far better amenity if the specified minimum balcony space is simply brought inside the living area.

Nonetheless – private outdoor space should continue to be promoted. If a developer proposes an alternative design featuring smaller or an absence of balconies, then the design should be thoroughly appraised. The Institute proposes Design Review Panels as the primary appraisal mechanism for alternative designs, these already exist with the Office

[5] 2021. Apartment Design Guidelines (preview February 2021). Sourced from: https://www.planning.vic.gov.au/__data/assets/pdf_file/0021/514164/Apartment-Design-Guidelines-Final-Draft-Report_280221_a.pdf

of the Victorian Government Architect (OVGA)and now introduced by the Melbourne City Council.

It should also be noted that for people living with disabilities, the National Disability Insurance Scheme (NDIS) aims to integrate Specialist Disability Accommodation into normal buildings (including Apartments) in order to maximise NDIS participants'[6] housing choices and social inclusion. The experience of Institute members who design Specialist Disability Accommodation is that people with high physical support benefit from large accessible balconies and use them frequently. They should therefore be highly accessible and large enough for wheelchair users.

Setting aside a number of apartments, especially in 'build to rent' apartment developments, that have adequately sized balconies for people living with a disability who have high support needs is an important consideration. The challenge will be for developers to enable these apartments to be purchased by or on behalf of the people who need to rent them.

Recommendation 3. A more comprehensive appraisal of proposed apartments designs is undertaken using Design Review Panels to ensure that all apartments are contributing to housing stock that meets the need of end users in respect of indoor and outdoor space. There should be a particular focus on ensuring that there is an adequate supply of apartments with sufficient outdoor (and indoor) space for people living with disabilities who have high physical support needs and rely on a wheelchair for their personal mobility.

2.2.4 Universal access.

The Apartment Design Guidelines for Victoria in and of itself has few provisions regarding universal access, with the exception of general minimum dimensions within apartments and bathroom floor layouts for Clauses 55.05-6 and 58.05-1 of the VPP. Few if any other access specifications are provided for an apartments complex as a whole. The Apartment Design Guidelines can, therefore, be assumed to rely heavily upon the National Construction Code (NCC) which only sets minimum requirements.

The Disability Discrimination Act (DDA) and its Premises Standards trigger many applications of Australian Standards and the National Construction Code. However, these are minimum standards to make buildings accessible. As noted above, current and future generations of occupants are more likely to reside for their entire lives in apartments so there is a "whole of life" challenge that the Victorian Government needs to be address.

The current objective of the Accessibility Objective for Clause 58.05-1 or Clause 55.05-06 -is to "*ensure the design of dwellings meets the needs of people with limited mobility*" Sizing of corridors, paths, doorways, are critical for people with other disabilities not just people who are mobility impaired and may rely upon a wheelchair. People who are visually impaired, hearing impaired, have intellectual or cognitive challenges may experience 'wayfinding' difficulties.

[6] 'Participant' is the term used for a person living with a disability who accesses support funding from the National Disability Insurance Scheme.

Design consideration needs to extend beyond doorway and bathroom/toilet dimensions to hearing augmentation for the people who are hearing impaired, as well as luminance and contrast considerations for people with moderate to severe visual impairment in common areas in buildings and all trafficable areas leading to a person's apartment.

Travel distances within apartments and to access the external community are a further consideration as, for many people, mobility impairment may involve strength and endurance issues. This may include older adults and others who live with various chronic health conditions.

To deliver truly accessible apartments it is necessary to design well beyond the minimum standards of the Apartment Design Guidelines and the National Construction Code. The term 'accessible' should be reserved for apartments that comply with *Australian Standard AS 1428.1:2021 Design for access and mobility, Part 1: General requirements for access - New building work.*

Access consultants could be mandated as part of the design process to ensure above minimum standard designs are achieved in all residential apartment buildings, not just in individual dwelling units, but all common infrastructure and communal facilities in an apartment complex.

A further issue is that the accessibility provisions do not respond to the issue of 'adaptability' – the ability to readily modify or retrofit apartments to meet the Accessibility Standard of AS1428.1 without major modifications to structures, building envelopes and fabric and/or essential services such as electrical and plumbing. Adaptable buildings are those which refer to Australian Standard AS4299-1999 Adaptable Housing.

Liveable Housing Design Guidelines[7] cover a broader range of needs across the lifecycle for all people and benefits:

> *Families with young children by making it easier to manoeuvre prams and strollers and removing trip hazards for toddlers.*
>
> *People who sustain a temporary injury that limits their mobility (for example as a result of sporting or work-related injury or motor vehicle accident).*
>
> *Ageing baby boomers who are looking to move or renovate their existing homes to better accommodate future needs.*
>
> *People with disability and their families enabling them better choice of housing and the opportunity to visit the homes of friends and relatives.* (ibid p. 9)

The guidelines are categorised at gold, silver and platinum levels.

[7] 2017. Livable Housing Australia. Livable Housing Design Guidelines fourth edition https://livablehousingaustralia.org.au/downloads/

If the aim of the design standard is that apartments are to be adaptable then the AS 4299 should be used or, if just enhanced access, then Liveable Platinum would be more useful.

If neither Australian Standard nor Liveable Housing Platinum level are referenced in Apartment Design Guidelines, then a different terminology should be used so there is no misinterpretation of what consumers are getting when the Apartment guidelines, as they stand, are used.

Issues around buildings in context, response to place, public open space contributions, street level activation and private open space are very important for liveability, sustainability and urban design for everyone. For people living with a disability, independence can be enhanced with amenities in close proximity - walking distance – such that they can be accessed without the assistance of another party such as a household member or support worker. These issues are not solved by the National Construction Code nor the current Apartment Design Guidelines as they are planning issues. As discussed below, a more wholistic approach to planning regulation is needed.

All public areas should be designed for accessibility to at least the AS1428.1 standard. Governments, developers and architects should be aware that obligations established by the Disability Discrimination Act 1992 are not limited by the National Construction Code.

Evacuation

Evacuation of buildings is of prime importance to most of the population and large percentages of the population are expected to make use of the enhanced amenity apartments with an ageing population, then this needs to be considered a priority.

While lifts should be used for evacuation there are very important aspects that need to be considered alongside dissemination of evacuation procedures to owners' corporations for the benefit of owners and occupiers. These should be discussed and agreed at the design stages of a project. The Australian Building Codes Board publishes a reference document[8] which considers a comprehensive range of design considerations.

Detail comments about accessibility features in the Apartment Design Guidelines.

Other issues of concern at a detailed level with regard to the Apartment Design Guidelines:

- Table D7 main bedrooms should be at least at the Liveable Housing Platinum Level – the bedroom examples shown on page 141 of the Apartment Design Guidelines do not have sufficient circulation space to turn and leave the room or access the bathroom or in the case of the 2-bedroom option get in or out of the bedroom or ensuite.
- Windowsill height for a main bedroom should be to a maximum of 1.0m.
- Table D4 shows an 820mm width door option. The minimum width for any "accessible" opening should be 850mm clear.

[8] Australian Building Codes Board. 2009 Lifts Used During Evacuation. Handbook. Non-Mandatory Document. https://www.abcb.gov.au/sites/default/files/resources/2020//Handbook-Lifts-Used-During-Evacuation-2013.pdf

- With reference to bathroom Option A (a toilet in the corner of the room with a nib of 700mm does not make enough space to provide for a grab rail or toilet roll holder.
- Bathroom Option B is not suitable for a swing door. If these are intended for wheelchair access, there is not sufficient space to turn around.

o Provide level access to all balcony areas.

Recommendation 4. The Victorian Government develops and promotes much higher standards for accessibility in apartments and apartment complexes that go beyond the National Construction Code and the current standards set out in the Apartment Design Guidelines. Reference standards include Accessibility Standard AS1428.1, Adaptability Standard AS4299 and the Gold and Platinum Standards of the Liveable Housing Design Guidelines. It is critical that the access standards consider all areas of the complex.

2.2.5 Designing buildings that require operation and maintenance for several decades.

No building is completed once built and occupancy commences. Buildings, analogous to cars, require constant maintenance and upkeep. The Institute draws attention to the complexity of multi-storey apartment buildings including:

- The size of the buildings and the extent of their exposure to environmental elements.
- Complex services including:
    - fire services systems and Evacuation Services,
    - water pressure pumps and management of grey water,
    - building surveillance, security and access controls,
    - vertical transportation,
    - complex electrical loads,
    - complexity of the internal information and communication technology and electricity distribution including large electrical loads and the interface with external utilities infrastructure,
    - vehicle parking (and increasingly requirements for electric vehicles),
    - heating, ventilation and cooling (including shading systems) to individual dwellings and common areas,
    - surface water drainage from rooftops and external areas including private balconies and communal outdoors areas,
    - rain-water harvesting,
    - irrigation of plants and trees in building greenspace areas, and
    - waste collection and disposal,
- Sustainability infrastructure that some Institute members are now featuring in their projects in respect of:
    - on-site sustainable electricity generation and battery storage,
    - embedded network management of electrical power and metering (+/- co-generation),
    - electrical vehicle (EV) charging infrastructure operated on common power and coordinated with the building operations infrastructure. This should include a set aside for fast chargers. However, overnight charging facilities would generally meet the needs of the majority of EV owners. Car parking spaces do not need to be “dedicated” to EVs. Installations can be made available for occupants for overnight charging at their allocated car park

operating off common power without need to directly connect to their apartment's electrical circuit and subsequently billed to their apartment or directly debited from their financial institution on a 'per use' basis.
- active shading systems.

As such, these buildings, once occupied, require significant monetary expenditure per annum to operate, and yet the operation of these buildings is provided oversight by owners' corporations with little or no training as to their role. Planning approvals take no long-range view beyond the constructed outcome itself as to how the building will be sustainably operated and maintained for decades to come.

In order to successfully accommodate a more wholesale shift to apartment living across the general population, owners' corporation structures probably should be reviewed for their adequacy for current and predicted future needs particularly where apartment unit owners within a complex number in the hundreds. Melbourne has many examples of Class 2 buildings that exceed 500 private lots within the one high rise building envelope. Such a review should address differing and potentially competing interests of owner-occupiers, investment owners, short-term owners and long-term owners.

A review should also examine the real cost of owning a unit within an owners' corporation considering higher maintenance rectification costs caused by undue delays in attending to issues, litigation costs due to poorly considered actions or inactions. Anecdotally, an owners' corporation in their current form, is often seen as a negative aspect of apartment ownership.

Recommendation 5. The Victorian Government undertakes a review to develop a stronger framework and scheme of regulation to ensure that householders' long-term interests are protected over the long-term life course of apartment buildings by provide robust government regulatory oversight for long term maintenance. This should be supported by the introduction of electronic building manuals.

2.2.6 Sustainability.

As stated in the introduction to this submission, the Institute strongly advocates for zero carbon building target to be achieve by the end of the current decade.

The Apartment Design Guidelines provide some guidance to sustainability from the perspective of building operation.

Buildings that are built sustainably using passive design principles will help prevent the increase in levels of atmospheric CO2 which threatens our long-term survival. Buildings built this way tend to be more inherently comfortable for occupants requiring less active heating and cooling. Sustainable buildings are also cheaper to operate and to live in.

This is a complex area and zero carbon[9] should not just be end use calculation, but also the manufacture and disposal at end of life of all products used to reach zero carbon. For

[9] CO2 that would contribute to climate change

example, if the zero-carbon calculation relies on solar panels to run air conditioning units to regulate comfortable temperatures and provide sufficient ventilation, it must also consider the carbon and energy required to manufacture, transport, maintain and then dispose of the panels and associated elements (e.g. batteries) at end of life.

Therefore, embodied carbon and energy and other potentially environmentally damaging materials' composition, that are not always disclosed when used in buildings, should also be considered. The National Construction Code (NCC) does not address these two important aspects, only the energy efficiency of the building itself.

Further carbon impacts need to be considered from the effect of the apartment building have on the surrounding environment, including heat sink effect, reflected energy, changed wind patterns, shadowing, etc.

Good design, in sustainability terms, also involves the selection of materials that have lower environmental impacts. Material selection can add lower *maintenance* costs for the life of the building - reducing the costs to owners and reducing energy inputs into the building.

Broader issues of sustainability when procuring building materials should also be understood from the perspective of social and economic sustainability and take into account whether the supply chain for particular materials involves practices such as forced labour or other exploitation of workers or communities. This a concern of the Institute.

There also need to for policy strategies to 'decarbonise' existing apartment buildings and upgrading existing older building stock as a low carbon sustainable option.

Recommendation 6.1 Develop further sustainability guidelines for apartments that:

- establishes a 2030 target for apartments to be designed and constructed for zero-carbon operation and provides specific guidance for sustainable building design and construction practice which addresses issues of:
    - embodied carbon and energy of materials
    - life cycle assessment of materials
    - disclosure of materials' composition
    - Impact of the building in its local context
- supply chain responsibility for building materials in relation to broader social and economic outcomes such as the eradication of enforced labour.

Recommendation 6.2 Develop and implement policy strategies to 'decarbonise' existing apartment buildings and upgrade existing older building stock as a low carbon sustainable option.

2.3 Strategies to lift design standards much further.

2.3.1 Alternative approvals pathways.

Planning approvals processes based on checklists of planning criteria may ensure that 'bad' design outcomes are avoided in the approvals process delivered by local government planning and building departments. Extending the current rules-based approach to a much higher set of design standards could take more new apartments from being 'habitable' to 'highly liveable'.

A highly prescriptive rules driven approach applying a higher set of standards could be advantageous if further coupled with a "ticks all boxes" prescriptive fast-track approval process. This approach would require every rule (guideline provision or standard) that pertains to a submitted application to be unequivocally met on first planning approval application. This could also be linked to the way local government authorities constructively negotiate community sentiment and objections to avoid protracted deliberations typically associated with the blocking of applications. This could mean that fewer applications would need to be adjudicated at the Victorian Civil and Administrative Tribunal. The incentive for developers is that avoiding planning delays also means avoiding financing costs and uplifts in construction costs that occur over lengthy delay periods.

A potential detriment of the "rules as written" vs "rules as intended" approach is that design firms, seeking to spend the time to provide innovation in their response to a brief, risk being less commercially competitive than those following set tick-box design algorithms. We address further below the incentivisation of good design to counteract this.

There is also a distinction to be made between providing more rules versus increasing the requirements of the existing rules. Increasing the minimum spatial requirements will certainly lead to better spatial amenity, for example, but providing new rules risks complicating the process of interpretation, interaction, response and demonstration of compliance as well as stifling innovation.

Innovative designs by their very nature may fail algorithm or prescriptive approaches to planning approvals even if the design meets the objectives set out in the Victorian Planning Provisions (VPP) Guideline or Standard. A good design can fail the rules, even if it meets the overall intent of the rules (or planning objectives as set out in the different clauses of the Victorian Planning Provisions).

An over-riding concern is that approvals achieved largely through algorithms or checklist can lead, over time, to urban landscapes filled with highly repetitive design. This may not be perceived to be a negative feature in all urban contexts. An example are cities such as Paris with its familiar and distinctive 19th Century buildings.

Research could assist understanding if highly repetitive design and a homogenisation of the place where people live can have a deleterious impact on people's psychological experience of their living environment. For example, whether highly repetitive design and loss of a distinct neighbourhood character could imbue in people a sense of monotony that reduces the perception of belonging to a specific place.

Design Review Panels (DRP)

A more wholistic and qualitative appraisal of whether innovative designs meet VPP objectives is required. There is an emerging trend of establishing design review panels including the long-standing Victorian Design Review Panel[10] for the Office of the Victorian Government Architect (OVGA), the new City of Melbourne Design Review Panel and Design Excellence Advisory Committee[11] and the current expression of interest for members of a new City of Ballarat Design Review Panel[12].

Design review panels could be established at different levels of geographic governance. Design review panels at the new Land Use Framework Plans[13] (LUFP) regional level would pay greater attention to precinct and other place-based designs for the purposes of master planning as well as appraising the individual apartment building itself.

DRPs at the local government level would pay greater attention to master plans for single or aggregated sites, such as brownfields redevelopment or greenfields subdivision, as well as single buildings.

Widespread establishment of design review panels would require consideration of the overall governance and establishment including:

- legal basis and governance (e.g. legislation and ministerial oversight),
- business model – direct user pays, funded from development levies, planning application revenue or state government output expenditure, and
- composition, including potential consumer, Traditional Owner and community representation as well as matter experts from architecture, planning, and landscape architecture.

In their operation, key issues which would need to be addressed are:

- the rules for when a project needs to be reviewed by a Design Review Panel and how this is triggered. At present there are no guidelines that specify this for the Victorian Design Review Panel.
- which design review panel is to be used and when.

Having clear guidelines and rules would help created greater certainty for all stakeholders to a development project.

Both the governance and operational issues potentially raises the question of which strategy, over the long term, would lead to the best outcomes, reduce variance, lead to

[10] https://www.ovga.vic.gov.au/victorian-design-review-panel
[11] https://www.melbourne.vic.gov.au/building-and-development/design-excellence/Pages/design-review.aspx
[12] https://www.ballarat.vic.gov.au/design-panel-eoi
[13] See: https://www.planning.vic.gov.au/policy-and-strategy/planning-for-melbourne/plan-melbourne/melbournes-future-planning-framework and https://engage.vic.gov.au/mfpf

financial and operational efficiencies. That is, whether a single statewide strategy, a more locally governed strategy or a combination of the two could be established.

Incentivising good design

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.

In the same way that a prescriptive ticks-all-boxes planning application could be coupled with the incentive for developers of a fast-track approval, other incentives could be provided for designs that do not sit neatly within the rules, but certainly meet overall planning objectives.

Principal amongst these is to provide developers with greater uplift – that is, more storeys and therefore more dwellings on a site. This incentive could also be used for developers who include provisions for a percentage of dwellings in a complex to be set aside for affordable housing as well as Specialist Disability Accommodation (SDA); though the alternative method is to codify 'inclusive zoning' for affordable and or accessible housing into planning overlays and development approvals.

Other 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.

In NSW, the Design Excellence Program[14] has been in place for a decade which uses design competitions,

> *The Design Excellence provisions of the City Centre Local Environment Plan (LEP) may require or provide the opportunity for a landowner to hold an 'architectural design competition' for the design of a building or larger site containing more than one building. That process may lead to a design based 'bonus' in building height and/or floor space ratio (FSR) and in that circumstance this document provides the guidelines for such competitions.* (ibid)

The City of Melbourne in 2021 has recognised the potential value of NSW's Design Excellence Program approach in its own document, *Design Excellence Program 2019–2030*[15] released in April this year together with the *Central Melbourne Design Guide*[16]. These are both important documents. While at the beginning of the journey of being implemented, they are limited in their application as they are specific to the City of Melbourne and/or Central Melbourne. The NSW Government Architect design excellence

[14]Office of the Government Architect NSW. Design Excellence Guidelines and Competitions. Sourced from: https://www.governmentarchitect.nsw.gov.au/review/design-excellence-guidelines-and-competitions

[15] https://www.melbourne.vic.gov.au/SiteCollectionDocuments/design-excellence-program.pdf
[16] https://www.melbourne.vic.gov.au/SiteCollectionDocuments/central-melbourne-design-guide.pdf

program sets in place a process that can be applied in any Sydney metropolitan setting, or even a regional city of NSW.

A different layer of guidance to integrate policy objectives.

The Victorian Department of Environment Land Water and Planning seeks to develop a number of important documents that take Victoria on a commendable pathway to sustainability. We note in particular, from the previous mentioned policy work above,

- Environmentally Sustainable Development Roadmap
- A range of Cooling and Greening Melbourne projects
- Built Environment Climate Change Adaptation Action Plans.

In NSW the *SEPP 65 (State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development)*[17] regulates into use the NSW Apartment Design Guidelines.[18] SEPP 65 is a more concise document than the Victorian Planning Provisions. It is based on clear principles:

- Principle 1: Context and neighbourhood character
- Principle 2: Built form and scale
- Principle 3: Density
- Principle 4: Sustainability
- Principle 5: Landscape
- Principle 6: Amenity
- Principle 7: Safety
- Principle 8: Housing diversity and social interaction
- Principle 9: Aesthetics

Appendix 1 provides the detailed Principles as set out in Schedule 1 of SEPP 65.

Moreover, Part 3 of SEPP 65 also regulates Design Review Panels for NSW, in relation to their constitution, membership and terms of office, and functions.

Presently, a process is underway to bring together SEPP 65 and other SEPPS into a new *Designing in Place* SEPP[19], to simplify and consolidate how to deliver good design in NSW,

> *The Design and Place SEPP puts place and design quality at the forefront of development. Our shared responsibility to care for Country and sustain healthy, thriving communities underpins the policy. The SEPP spans places of all scales, from precincts, large developments, and buildings to infrastructure and public space.* (Design and Place SEPP webpage).

Victoria could benefit from a regulatory approach to Apartment Design more similar to NSW's SEPP 65's principles and the intent of NSW's new Designing in Place SEPP. This new approach could draw upon the other important policy work of the Victorian

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[17] State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development. (Current version to 12 February 2021). https://legacy.legislation.nsw.gov.au/~/pdf/view/epi/2002/530/whole

[18] NSW Department of Planning and Environment (2015) Apartment Design Guide. Tools for improving the design of residential apartment development. https://www.planning.nsw.gov.au/Policy-and-Legislation/Housing/Apartment-Design-Guide

[19] https://www.planning.nsw.gov.au/Policy-and-Legislation/State-Environmental-Planning-Policies/Design-and-Place-SEPP

Government in respect of sustainability and urban land use planning. Such a vehicle could also codify a statewide framework for design review panels.

Recommendation 7. Develop a more holistic regulatory framework for the Apartment Design Guidelines through a more succinct and focussed regulatory instrument than the Victorian Planning Provisions – similar to the NSW SEPP 65, but also noting the development of the NSW Designing in Place SEPP. In particular, consideration should be given to establishing a statewide framework and regulatory scheme for design review panels.

2.3.2 Post occupancy building evaluation.

At present there is no regulated requirement for post-occupancy building evaluation. This is additional to the usual defects period in contracts where in the 12 months post occupancy building defects are identified and rectified. However the actual operation of the building, once occupied, is not subject of any form of appraisal such as:

- energy use,
- indoor air quality and comfort (beyond obvious noxious smells or drafts which would be indicative of a defect),
- light and noise,
- responsiveness of private dwellings in the complex to accessibility and liveability
- responsiveness of communal spaces to accessibility, liveability and development of supportive neighbour communities,
- durability over the longer term of fixtures, fittings and surfaces,
- dampness and condensation issues arising from better sealed buildings, or
- accessibility.

We recommend that there should be a system of regulated post-occupancy evaluation for all new apartment buildings (and majorly refurbished apartment buildings) that continues over the life of the building. The purpose of the evaluation would be to provide a rich research dataset that informs our understanding of how buildings work which could then be correlated with data on how buildings are built such as the procurement model used, construction material and methods and key design features.

This data on how the building was procured and constructed could also capture information from planning and building approvals as well as any design and construction certifications and declarations which may be introduced in Victoria as an outcome of the current building reform process. These have been introduced in NSW consequent to that state's building reform. The Institute has advocated that these should also be introduced in Victoria in our submission to the current building reform[20].

Recommendation 8. The Victorian Government establishes a system of regulated post-occupancy evaluation for all new apartment buildings (and majorly refurbished apartment buildings) that continues over the life of the building to create an important database about long term building performance that it used to improve apartment buildings. The operation

[20] In response to the Framework for Reform consultation discussion paper released by the Expert Panel overseeing Victoria's Building Reform in April this year,

of the database should include a research and technical advice unit that delivers findings, technical advice and recommendations to construction industry stakeholders including developers, financiers, planners, architects, engineers, builders, building surveyors', owners' corporations, local government and state government agencies such as the Victorian Building Authority and Homes Victoria

2.3.3 Who should design apartments?

The Institute particularly notes that both Building Designers/Draftspersons and Architects design apartments. In NSW Class 2 buildings (multiple storeys apartments above 2 storeys) must be designed by an Architect. This standard should be applied nationally.

This not a call to protect Architects, but rather a call to protect consumers. There is a vast difference in training and professional requirements between an Architect and a Building Designer or Draftsperson. To this end, the Institute has recently sent to every relevant Minister for building across Australia, a joint statement with the Association for Consulting Architects (ACA) and the Association of Architectural Schools of Australasia (AASA) in response to the National Registration Framework for Building Practitioners.

The statement emphasises the benefits to consumers especially in light of the recommendations of the Shergold-Weir review's national *Building Confidence*[21] report that focussed on compliance and enforcement systems. The underlying reason for the Shergold-Weir review was the lack of trust by the public that the building and construction industry can deliver safe, compliant, and fit-for-purpose buildings. A major issue that brought about the commissioning of the review by the Building Ministers' Forum were cases of serious defects in apartment buildings.

The National Registration Framework (NRF) has been developed by the Australian Building Codes Board on behalf of the Building Ministers' Meeting of the National Cabinet[22]. Its recommended scope of practice for Building Designers is given equivalence to Architects.

The joint statement sets out the distinctions between an Architect and Building Designer (draftsperson) taking into account level of qualification Australian Qualifications Framework (AQF) levels, competency and how competency for registration is attained and appraised. It also notes that Architects as against Building Designers or Draftspersons are required to abide by a statutory code of professional conduct[23] - which forms part of the Architects Regulations (2015). Architects' responsibilities often include that of lead consultant role in the novated design and construct procurement model (often used in multi-residential apartments

[21] Shergold, P. and Weir, B. (2018) Building Confidence: Improving the effectiveness of compliance and enforcement systems for the building and construction industry across Australia. February 2018
[22] Taking over the responsibilities of the Building Ministers' Forum of the former Council of Australian Governments.
[23] Schedule 1—Victorian Architects Code of Professional Conduct of Architects Regulations made under the authorising provisions of the Architects Act 1991

development), with all the associated responsibilities and liabilities associated with that role.

We submit the joint statement as an attachment to this submission.

Recommendation 8. The Victorian Government adopts the recommendations of the joint statement by the Australian Institute of Architects, the Association for Consulting Architects (ACA) and the Association of Architectural Schools of Australasia (AASA) in response to the National Registration Framework for Building Practitioners.

Procurement of Design.

In the two larger states (Victoria and NSW), the extensive use of novated design and construct procurement building delivery models, underpins multi-storey apartments development.

Simply put, novation means that at some point in an apartment development project the Architect and other consultants are no longer contracted to the developer or owner but are novated across and now contracted to the builder (the head contractor). This often occurs well before full construction details have been developed as part of the building's design documentation. The contractual obligation to the owner /developer is broken. Our Institute's own research[24] demonstrates that a frequent problem is the loss of the original design intent manifest in materials substitutions and changes to design features and detailing. In addition, there is often compromised access to the site for the Architect to inspect construction works, and restriction on communication with the original party (the owner or developer).

The nationally agreed program of building reform (mentioned above) has been underway in each state and territory since 2018. The reform was initiated by the former Building Ministers' forum of the Council of Australian Governments[25], to better protect consumers and end-users of buildings from catastrophic failures such as those seen in the Melbourne Lacrosse Tower fire and the structural failure in the Opal Tower in Sydney.

In April 2018, the Building Ministers' Forum published its expert assessment of the effectiveness of compliance and enforcement systems for the building and construction industry. The report, *Building Confidence*[26], and also eponymously known as the *Shergold-Weir* report, in reference to its authors, acknowledged that in relation to multi-storey residential dwellings, novated design-and-construct procurement could ultimately lead to '*a significant difference between the as-designed building documentation and the as-built building'.*

It is a particular issue in Victoria and NSW, where novated design-and-construct

[24] Soon to be published and comprising more than 400 case examples.
[25] Now the Building Ministers' Meeting under the National Cabinet.
[26] Shergold, P. and Weir, .B. 2018. Building Confidence. Improving the effectiveness of compliance and enforcement systems for the building and construction industry across Australia. Sourced from: https://www.industry.gov.au/sites/default/files/July%202018/document/pdf/building_ministers_forum_expert_assessment_-_building_confidence.pdf

procurement has been a long-established practice for more than two decades. Novated design-and-construct procurement has embedded itself in the two major capital cities and their surrounds. It is a method that the market has embraced to deliver large scale multi-storeys residential and even commercial buildings. It is even the method now commonly used by governments such as the Victorian Government for much of its building procurement.

From a developer's and a financier's perspective novated design-and-construct procurement responds to the time and cost pressures, and risk allocation, deemed necessary to market and deliver owners corporation (multi-owner) off-the-plan developments. This 'certainty' factor also flows through to the head contractor (the builder) who needs to ensure that the building is delivered to a specified contracted price that developers and financers need to have determined as early as possible in a project.

As previously mentioned, the Architect is often the lead consultant with structural, services, acoustics, wind and fire engineers, façade specialists, landscape architects and other specialist consultants assigned the role of 'subconsultants'. Much of the risk rests with this role of lead consultant. It is important to recognize the responsibility of this role and the benefit that a competent and experienced Architect brings to exercising risk mitigation and achieving quality outcomes.

Over the past three years, the Institute has researched and consulted with a range of stakeholders across the building procurement and construction sector to better understand the impact of novated design and construct procurement where consultants'[27] agreements are novated from the principal (the owner or developer) to the contractor (the builder).

Novation occurs at different stages of design development, and often well before significant design details or much more comprehensive construction documentation has been developed.

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. The very elements that mean the difference between a high quality and durable building with high levels of performance with respect to emissions can, concerningly, be 'value-managed' out of the design at the direction of the contractor.

As part of the NSW implementation of the nationally agreed reforms the NSW Building Commissioner has introduced a regime of designer and builder certifications and declarations which is commencing with Class 2 structures (multi-residential apartment

[27]Including architects and non-architect designers, and geotechnical, structural, services, fire and façade engineers and specialists

developments). In the NSW Design Declaration scheme[28], one of the shortcomings of novated design and construct procurement – the premature commencement of construction prior to the completion of all design – has been addressed.

The NSW scheme of design declarations requires full designs including construction details to be certified by the designer[29] prior to the commencement of construction. Our Institute has, this year, recommended a similar scheme of design declarations using a staged model to better be able identify early and manage risks throughout the design process and aligned to both planning and building permit approvals. This is detailed in our submission to the Expert Panel overseeing Victoria's current building reform process[30].

In addition, the Institute, later in 2021 will launch an Industry Code of Novation[31] and in 2022 a reference model Deed of Novation for use in Novated Design and Construct Procurement to improve the practices surrounding novation in its use in design and construct procurement. As the Victorian Government and its various agencies who undertake building procurement (e.g. Homes Victoria, Victorian Schools Building Authority) also use the novated design and construct procurement model extensively, it is of important benefit to all Victorians, to ensure that where government procurement occurs as part of the delivery of social housing outcomes that optimal conditions are established for novated design and construct procurement.

Recommendation 9. The Victorian Government give greater guidance to procurement methods so that the intentions of department designs, including designs approved design review panels, and pursuing design excellence are enabled to be fully realised and deliver high quality, liveable, sustainable and affordable apartments. This is to be supported by using the Code of Novation (for novated design and construct procurement) soon to be published by the Australian Institute of Architects.

[28] https://www.fairtrading.nsw.gov.au/trades-and-businesses/construction-and-trade-essentials/design-and-building-practitioners/new-obligations-design-and-declaration
[29] All Class 2 buildings of 3 storeys or greater must be designed by an Architect in NSW.
[30] See p 13 and p37 in Submission in Response to Framework for Reform - Modernising Victoria's Building System (Discussion Paper).https://www.architecture.com.au/wp-content/uploads/Australian-Institute-of-Architects-Submission-on-Framework-for-Reform_20210525_FINAL.pdf
[31] Currently available in draft upon request to vic@architecture.com.au

3 APPENDIX I – SCHEDULE 1 DESIGN QUALITY PRINCIPLES FROM NSW SEPP 65.

Principle 1: Context and neighbourhood character

Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions.

Responding to context involves identifying the desirable elements of an area's existing or future character. Well designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood.

Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change.

Principle 2: Built form and scale

Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings.

Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements.

Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

Principle 3: Density

Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context.

Appropriate densities are consistent with the area's existing or projected population. Appropriate densities can be sustained by existing or proposed infrastructure, public transport, access to jobs, community facilities and the environment.

Principle 4: Sustainability

Good design combines positive environmental, social and economic outcomes.

Good sustainable design includes use of natural cross ventilation and sunlight for the amenity and liveability of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs. Other elements include recycling and reuse of materials and waste, use of sustainable materials and deep soil zones for groundwater recharge and vegetation.

Principle 5: Landscape

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A positive

image and contextual fit of well designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood.

Good landscape design enhances the development's environmental performance by retaining positive natural features which contribute to the local context, co-ordinating water and soil management, solar access, microclimate, tree canopy, habitat values and preserving green networks.

Good landscape design optimises useability, privacy and opportunities for social interaction, equitable access, respect for neighbours' amenity and provides for practical establishment and long term management.

Principle 6: Amenity

Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident well being.

Good amenity combines appropriate room dimensions and shapes, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas and ease of access for all age groups and degrees of mobility.

Principle 7: Safety

Good design optimises safety and security within the development and the public domain. It provides for quality public and private spaces that are clearly defined and fit for the intended purpose. Opportunities to maximise passive surveillance of public and communal areas promote safety.

A positive relationship between public and private spaces is achieved through clearly defined secure access points and well lit and visible areas that are easily maintained and appropriate to the location and purpose.

Principle 8: Housing diversity and social interaction

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.

Principle 9: Aesthetics

Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures.

The visual appearance of a well designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.