

**Submission
No 33**

INQUIRY INTO APARTMENT DESIGN STANDARDS

Organisation: Council Alliance for a Sustainable Built Environment (CASBE)

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The Committee Manager
Legislative Assembly Environment and Planning Committee
Parliament House, Spring Street
EAST MELBOURNE VIC 3002
Email: apartmentdesign@parliament.vic.gov.au

Dear Committee Manager,

Re: Inquiry into Apartment Design Standards

The Council Alliance for a Sustainable Built Environment (CASBE) is pleased to provide the following response to the Inquiry into Apartment Design Standards. This is a timely inquiry given the shift to home working that has occurred in response to the global pandemic.

CASBE will focus our feedback on the second point listed in the Terms of Reference, namely that of *improvements that can be made to the liveability in apartments and apartment building developments, including communal areas*.

Background

[CASBE](#) is a collaborative alliance of Victorian councils committed to the creation of a sustainable built environment within and beyond their municipalities. CASBE provides a forum for the exchange of information and ideas on innovation and best practice in environmentally sustainable design (ESD), particularly through planning policy reform. You can find a complete list of our 40 members [here](#).

Our local, ground-up approach has resulted in collaborative local government led action and broad scale positive change to Victoria's built environment and a significant reduction to its consequent environmental impacts.

CASBE is supported by the Municipal Association of Victoria - the peak representative and advocacy body for Victoria's 79 councils.

CASBE has developed the *Built Environment Sustainability Scorecard (BESS)* - an online tool for assessing the sustainability of development proposals at planning stage. BESS provides a consistent assessment methodology for CASBE's *Sustainable Design Assessment in the Planning Process (SDAPP)* framework – an approach adopted by numerous Victorian Councils.

SDAPP and BESS both consider whole of building functionality and performance for all building classes including Class 2 Buildings – Apartments. The BESS tool covers key elements

that form good liveability and design practice. It supports councils with developing a productive, sustainable and resilient community.

BESS is provided on a subscription based service to CASBE council members, and is currently used by the development industry in 28 municipalities in Victoria. In 2020-21, BESS assessed 4163 developments with 5.6 million sqm of building floor area and 33,000 dwellings.

Better Apartment Design Standards (BADs)

CASBE supports the existing Better Apartment Design Standards in the Victorian Planning Scheme. Feedback from councils has indicated that the BADs have generally delivered improved apartment amenity and has lifted the overall design of new apartment development.

While the BADs have sought to deliver well designed, more spacious, light-filled and well-ventilated apartments, there remains scope for further consideration of how planning policy can deliver even better apartment development. This is particularly relevant given the enforced period of time spent by apartment dwellers in their homes due to the pandemic. Long periods in lockdown have served as a critical reminder of the importance of apartment design for health and wellbeing.

In 2018, the Victorian Government released the *Better Apartments in Neighborhoods* (Stage 2) discussion paper which proposed changes to the BADs that relate to the relationship between new apartment developments and the amenity of existing neighborhoods.

CASBE generally supported these changes to the standards. We provided detailed feedback in our submission to that discussion paper. Please refer to our submission to that Discussion Paper which is attached. It is our view that these proposed changes improve the amenity of apartment design. These changes are yet to be gazetted in planning policy.

CASBE recommends that these changes are gazetted as a matter of priority.

Support for regional growth in apartments

It is also worth noting that regional Victoria is seeing rapid growth due to a shift of population away from metropolitan areas, and it is expected that there will be an increased requirement for apartment development in these areas as a result. It is important to ensure that education and training is available for regional developers and planners who may not be as experienced in these typologies as metropolitan counterparts.

Consideration should be given to ensuring that the apartment standards that are applied within metropolitan and outer growth areas can be easily and equitably applied to regional areas.

The impact of daylight on human health

The existing standards in BADS relating to Building Setbacks, Room Depth and Windows are intended to address the issue of access to daylight.

However, we are concerned that where elements such as building setbacks are reduced, deeper apartments are provided or other daylight restrictions are included (e.g. wing walls, privacy screening), daylight could be severely compromised-especially with the use of lightwells and light courts. Therefore, it is recommended that:

- a minimum amount of sunlight to be received in apartments in mid-winter. (For example, the approach adopted in BESS IEQ 1.3 Winter Sunlight requires that the living rooms of at least 70% of apartments receive a minimum of 3 hours direct sunlight between 9am and 3pm at the winter solstice.)
- Expand the standard relating to room depth to ensure that each apartment is able to receive an adequate amount of daylight, including south facing single aspect apartments. Lux level testing be required (through decision guidelines) to ensure that adequate amounts of daylight are maintained.

CASBE research into daylight and health – Stage 1

In 2019, CASBE undertook a research project to determine the Health Impacts of Daylight in Buildings. This was intended as Stage 1 in a two-stage process. This report outlined the findings of research undertaken by the University of Technology Sydney (UTS) for the Health Impacts of Daylight in Buildings project for MAV/CASBE and DELWP. The work aimed to identify evidence for the health impacts of daylight inside buildings, and to make recommendations for how the Victorian planning system might integrate controls that will require new developments to provide adequate daylight to benefit human health.

The findings of the report were:

- There is very clear evidence that exposure to daylight is significantly beneficial for a wide range of human health conditions and well-being.
- The exposure levels to achieve health benefits are not clearly quantified in the literature. The clearest evidence that can be referenced as a defensible basis for these recommendations is that exposure to a minimum of 180 lux for 1 hour a day provides the minimum desirable circadian stimulus. Evidence suggests that exceeding this minimum will yield significant improvements in health outcomes across a range of health conditions and issues, however it is difficult to identify an appropriate exposure level.

CASBE is happy to provide this report to the Inquiry in confidence. It is our intention to publish this work with the conclusion of Stage 2.

CASBE research into daylight and health – Stage 2

Stage 2 of our research into daylight is underway. The aim of the Stage 2 project is to support the health of building occupants (focussing on apartments) as impacted by daylight access by informing changes to physical building design criteria in the Victorian regulatory system (with a focus on the Victorian Planning Scheme) and the Built Environment Sustainability Scorecard (BESS).

To achieve this, we seek to determine whether current standards in the Victorian regulatory system and BESS (bess.net.au) are achieving recommended standards (as provided) for daylight provision in residential apartment buildings (as modelled). We also seek to determine what design considerations impact daylight provision to a sufficient degree to warrant inclusion as physical criteria (e.g. BESS Deemed-to-Satisfy or simplified daylight calculator/s) to achieve the recommended standards for daylight provision.

Specifically, the objectives are to determine:

1. On the basis that current dimensional standards in the Victorian regulatory system and BESS are being met:
 - a. What daylight levels are being delivered to apartments?
 - b. Do the daylight levels being delivered to apartments (as modelled) achieve particular Australian daylight performance measures (as provided)? If not, under what design criteria and to what degree are they not?
2. If particular Australian daylight performance measures are not being met, what physical design considerations (e.g. room depth, glazing size, screening) have an impact on daylight provision to a degree warranting inclusion in dimensional standards (individually or as combinations) under the Victorian regulatory system and supporting instruments? Supporting instruments might include simplified calculation tools, curves, tables or similar for early design assessment in BESS or fact sheets. The outcomes of this research are intended to inform each of these potential approaches.

This project is currently in the inception stage. We anticipate a final report on this project by mid 2022. CASBE is partnering on the project with the Department of Environment, Land, Water and Planning.

Thermal comfort in apartments

We provide the following commentary about thermal performance of apartments and its subsequent impact on the thermal comfort of occupants.

Almost all apartments in Victoria are assessed through the planning process including an assessment by either BESS or the Green Building Council of Australia's Green Star tool. Data from the BESS tool indicates that over 80% of apartments assessed in BESS from 2019 to 2021 would meet the draft 2022 National Construction Code standards (7 star energy rating for the envelop) without any solar PV contribution. The current legislated minimum energy rating for apartments is an average of 6 stars NatHERS and a minimum of 6 stars NatHERS.

It is our view that work by CASBE member councils - in seeking early consideration of energy efficient design from apartment developer, and the subsequent raising of performance - has largely led to the higher NatHERS star rating for Class 2 in Victoria shown in the BESS data.

As noted in the Tony Isaacs Consulting report, [Cost and Benefits of upgrading building fabric from 6 to 7 stars](#), apartments in climate zones in Victoria have a higher current NatHERS star rating than other jurisdictions. The average rating being 7.0 stars in the previous 12 months of the date of that report. CSIRO's Australian Housing Data (as at 10 October 2021) shows a

7.0 star average for Victoria from January 2019 to August 2021. This is consistent with project data from the BESS tool.

While the Victorian Government have committed to a 7-star standard for new homes, it isn't clear if this applies to both Class 1 and 2 buildings. In addition, as outlined above, we are of the view that the Victorian development industry is currently close to achieving this target and that as such, **the draft NCC standards would deliver little improvement in building outcomes for Class 2 in Victoria.**

CASBE recommends that Victoria seeks an average of 7.5 stars energy performance of the envelop of apartments through a Victorian variation to the NCC.

CASBE's current work on Elevating ESD Targets for buildings

Thirty-one Victorian councils and CASBE are currently collaborating on a joint research project that aims to elevate Environmentally Sustainable Development (ESD) targets for new development, including targets for zero carbon development. This project includes a focus on apartments and aims to an evidence base for:

- New developments that produce zero net emissions, better manage water and waste, increase greening and biodiversity and are more resilient to our changing climate.
- Buildings that provide a healthier, more comfortable environment for our community and improve health outcomes.

We look forward to being able to share more about this project as our work progresses.

This submission has been prepared by the CASBE Secretariat on behalf of CASBE member councils. If you have any questions related to this submission, please contact Natasha Palich on the details below.

Yours sincerely,

Natasha Palich
CASBE Executive Officer
Council Alliance for a Sustainable Built Environment
Municipal Association of Victoria

[Redacted signature block]

Notes:

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CASBE is auspiced by the Municipal Association of Victorian (MAV). This submission is made on behalf of CASBE member councils, and the views represented in this submission do not necessarily represent the views of the MAV. While this paper aims to broadly reflect the views of CASBE member councils, CASBE has a diverse mix of member councils and the views represented in this submission do not necessarily represent the views of all CASBE members individually.

Individual councils may also respond to issues specific to, and on behalf of, their communities. The CASBE staff thanks and acknowledges the contribution of those who have provided their comments and advice in the development of this submission.