

Mr Ryan Batchelor MLC,
Legislative Council Environment and
Planning Committee,
Parliament House, Spring Street
East Melbourne VIC

RE: Inquiry into Climate Resilience

Dear Mr Ryan Batchelor,

YIMBY Melbourne thanks the Legislative Council Environment and Planning Committee for the opportunity to provide input into the Inquiry into Climate Resilience.

As an organisation that advocates for housing abundance, preparing our built-form environment for the effects of climate change is a fundamental consideration in any proposed solution to our housing crisis.

Our submission focuses primarily on terms of reference (b) through (d). We make a total of four recommendations.

In the first section, we discuss how restrictive zoning forces a majority of Victorians into the geographic areas with the highest climate risk. Zoning should be reformed so that more homes can be built in our most climate-resilient areas.

In the second section, we discuss how arbitrary planning instruments have real and detrimental effects on our state's overall climate resilience. Planning controls should be measured against a hierarchy of concerns, within which climate resilience should trump heritage and neighbourhood character.

We thank the Committee for engaging with our organisation and look forward to working with you throughout this inquiry and beyond.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'JOB'.

Jonathan O'Brien
Lead Organiser, YIMBY Melbourne
lead@yimby.melbourne

Recommendations

Upzoning for climate resilience

1. Reform zoning to enable more homes to be built in climate-resilient, inner-city areas.
 - a. Implement the recommendations of YIMBY Melbourne's Melbourne's Missing Middle report and enable six-storey mixed-use development around all 1,922 existing fixed-rail stops.

The real climate risks of arbitrary planning rules

2. Remove all upper-level setback requirements for buildings less than 76 metres tall across the Victorian planning scheme.
3. Reform heritage protections to permit easier retrofitting, including the installation of double glazed windows, split-system heating, and solar panels.
4. Reform the planning system to establish a hierarchy of considerations, such that climate, housing quality, and housing supply concerns outweigh those of heritage and neighbourhood character.
 - a. Reassess all planning rules against this reformed hierarchy of considerations.

Introduction: preparing for a sustainable future

As the effects of climate change begin to induce more frequent and extreme weather conditions, it is imperative to make our housing and communities more resilient to these significant challenges.

Many submissions to this inquiry will discuss the resilience of our individual built forms themselves—focusing on build materials and quality. YIMBY Melbourne believes that this is vital; however, it is not the focus of our submission.

In this submission, we will focus on climate resilience as it relates to *where* we build, just as much as *what* we build. We know Victoria's population is going to double over the coming decades, and where those new Victorians live and work is vital to ensuring robust and statewide climate resilience.

Uncontrolled urban sprawl has pushed our major growth areas deeper and deeper into land that has higher risks of flood and fires.¹ As the National Growth Areas Alliance have highlighted, the outer suburbs are home to many of Australia's most vulnerable residents²—climate change and its associated disasters will only heighten their entrenched disadvantages.

These current policy settings, helmed by our archaic and restrictive planning system, have created a situation in which people are blocked from living in our most climate-resilient places, and the bulk of our population growth is taking place in our most at-risk areas. This needs to change.

¹ ['Australia's City Fringes Will Soon Be Home to 7.5m People. Now Experts Are Warning of a National Crisis'](#) – ABC News; 27 April 2023

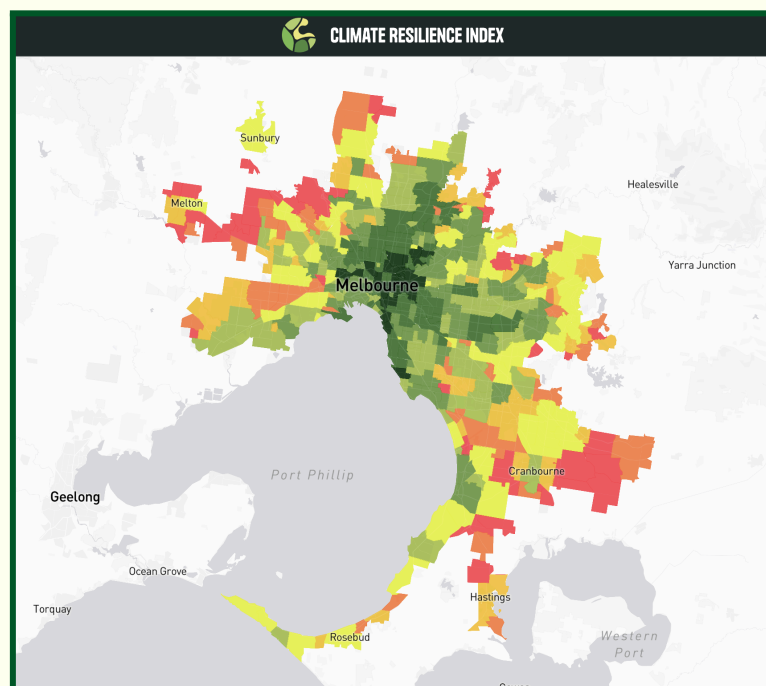
² [2023-24 Pre-Budget Submission](#) – National Growth Areas Alliance; 2023

Upzoning for climate resilience

Key points

- Melbourne's growth suburbs face the highest levels of climate risk. These are also the areas where we build most of our housing.
- Inner-middle Melbourne is heavily climate resilient. However, our planning system makes it very hard to build homes in these areas.
- Fishermans Bend is an example of an inner-city planning failure that only exists because housing and development is restricted across much of our city.

Well-timed to this inquiry is the release of Tract and OneMap's Climate Resilience Index.³ This index weighs four categories of climate resilience and measures the performance of each Melbourne suburb.



Source: [Climate Resilience Index](#)

The inner-city performs most strongly in this index because of its resilience to floods and fires, as well as its proximity to amenities and transport. This correlates with primary sources such as the Forest Fire Management Victoria, and the Climate Council's Climate Risk Map.^{4,5} These two additional sources highlight that the key risk

³ [Climate Resilience Index](#) – Tract & OneMap

⁴ [Bushfire Planning Strategy](#) – Forest Fire Management Victoria

⁵ [Climate Risk Map of Australia](#) – Climate Council

to inner-middle Melbourne is riverine flooding, while other risks are much more scarce than the outer suburbs.

Suburb	Climate Resilience Index ↓	Suburb	Climate Resilience Index ↑
East Melbourne	80.76	Cardinia	14.45
Kew	78.96	Officer South	22.25
South Yarra	78.48	Calder Park	23.16
Melbourne	78.18	Thornhill Park	23.57
Abbotsford	75.98	Fraser Rise	29.65
Clifton Hill	75.55	Bonnie Brook	29.8
Fairfield	75.35	Moorabbin Airport	30.22
Richmond	74.45	Rockbank	30.77
St Kilda	74.44	Deanside	31.01
Fitzroy North	74.34	Tottenham	31.33

Source: [Climate Resilience Index](#)

Indeed greenfield and growth areas, which are spread out over large areas, are much more exposed to the risks imposed by climate change as per all the sources listed above. Additionally, overreliance on expansion into these areas is having a high impact on ecological diversity, due to the high amounts of land razed and repurposed for new greenfield housing.

Rather than continuing to expand Melbourne outward, increasing climate risk through endless sprawl—we should instead focus on building more homes in resilient areas, thereby enabling current and future Melburnians to benefit from existing resilient infrastructure and amenity configurations.

However, under current planning controls, it is not possible to build more homes in most of our city's most climate-resilient areas. At present, more than half of residential land within 10 kilometres of the CBD is either zoned for single detached homes (Neighbourhood Residential Zone) or subject to onerous heritage controls.⁶ In order to ensure climate resilience is more equitably shared between Victorians, we must enable more Victorians to be able to live in high-amenity, high-resilience areas.

The best way to do this is to embrace the planning reforms put forth in YIMBY Melbourne's 2024 *Missing Middle Housing Targets* report.⁷ Here we outlined a simple method to enable more development in inner-middle Melbourne. By increasing zoned capacity more than seven-fold, we can enable a large majority of future population

⁶ <https://mapshare.vic.gov.au/vicplan/>

⁷ <https://targets.yimby.melbourne/>

growth to take place within our most climate-resilient suburbs, across the most resilient areas of the city. This set of reforms will enable the sustainability benefits and other policy recommendations outlined within our flagship 2023 *Melbourne's Missing Middle* report.⁸

Research from San Francisco clearly shows that redevelopment of contaminated brownfield land offers large tertiary greenhouse gas reductions due to higher housing density, less utility and road construction needs, shorter commute distances, and smaller household energy consumption.⁹ Within the research, this overall reduction in emissions held true even when factoring in the emissions associated with the decontamination and demolition of inner-city sites.

There are other notable benefits to more consolidated urban forms, such as easier leveraging of vital community infrastructure during climate-induced extreme weather events. An example would be the extension of library and pool hours during heat waves. Car-dependent environments can make it harder to leverage due to the long distances people are required to travel to get to these facilities and the geospatial disconnect some local community members might have from their community infrastructure.

While it is evident, from the above and more, that the bulk of Melbourne's dwelling growth should take place in the inner city, this is not to say that all areas close to the city centre should be developed.

One inner-city area that is likely unsuitable for development is Fishermans Bend. However, the same planning system that has restricted development across the lion's share of our inner city has also caused billions of dollars of public and private capital to be poured into keeping this centrally planned dream alive.

Case study: Fishermans Bend and disaster-prone land

Often, the cheapest land is prone to natural disasters such as storms, bushfires and floods. While the initial land cost may be lower, this is only because the total lifetime costs will be higher. These high costs include:

- the significant engineering works required to reduce natural disaster risks,
- the construction costs of rectification,
- the cost of emergency services and accommodation, and
- the social costs of putting people in harm's way.

⁸ <https://yimby.melbourne/missing-middle>

⁹ [Mitigation potential of contaminated land redevelopment: A city-level assessment method](#) – Hou et. al; January 10, 2018

Disaster-prone land is not an insignificant issue across our state. Indeed, the Climate Council's *Uninsurable Nation* report highlights that at least 2.6% of Victorian homes will be uninsurable by 2030 due to climate risks.¹⁰

The case study we will consider here is Fishermans Bend, an inner-city area at high risk of tidal, coastal, and storm flooding. According to the Australian Water Association, around 5% of the area is below the 1% Annual Exceedance Probability (1% AEP) flood level. This means that each year there is a one in 100 chance of flooding that exceeds this level. By the end of the century, a third of the Fishermans Bend area will be below this 1% AEP level. This makes development unlikely, as a high flooding risk is associated with exorbitant home insurance costs and uninsurability.¹¹ Despite these very real challenges, the Victorian Government continues to pretend that Fishermans Bend will be successfully developed by the market.

However, high-risk locations like Fishermans Bend are only contemplated for housing and development because of our state's restrictive planning system. If it were possible to build in the safe, climate resilient areas where people want to live, then no one would be trying to build in the high-risk Fishermans Bend area.

The failure of Fishermans Bend, and the millions wasted by the government to try to make it happen, is a clear indicator that our planning system is broken, and exacerbating climate risks. The configuration of housing development discussed in this section is a direct result of a planning system that privileges the opinions of a small anti-housing minority over the wellbeing of the majority of Victorians. This is obviously no way for a society to be run, and yet it is run this way.

The best way to ensure the future population of Victoria is afforded access to climate-resilient infrastructure is to make it legal to build in climate-resilient places. This means permitting medium density across our whole city, where climate risks are lower, and where people can be afforded access to pre-existing infrastructure, amenities, and jobs.

Recommendations:

1. Reform zoning to enable more homes to be built in climate-resilient, inner-city areas.
 - a. Implement the recommendations of YIMBY Melbourne's *Melbourne's Missing Middle* report and enable six-storey mixed-use development around all 1,922 existing fixed-rail stops.

¹⁰ [Uninsurable Nation: Australia's most climate-vulnerable places](#) – Climate Council

¹¹ [This former lowland swamp is set to become Australia's coolest new suburb](#) – Elle Hardy; January 18, 2021

The real climate risks of arbitrary planning rules

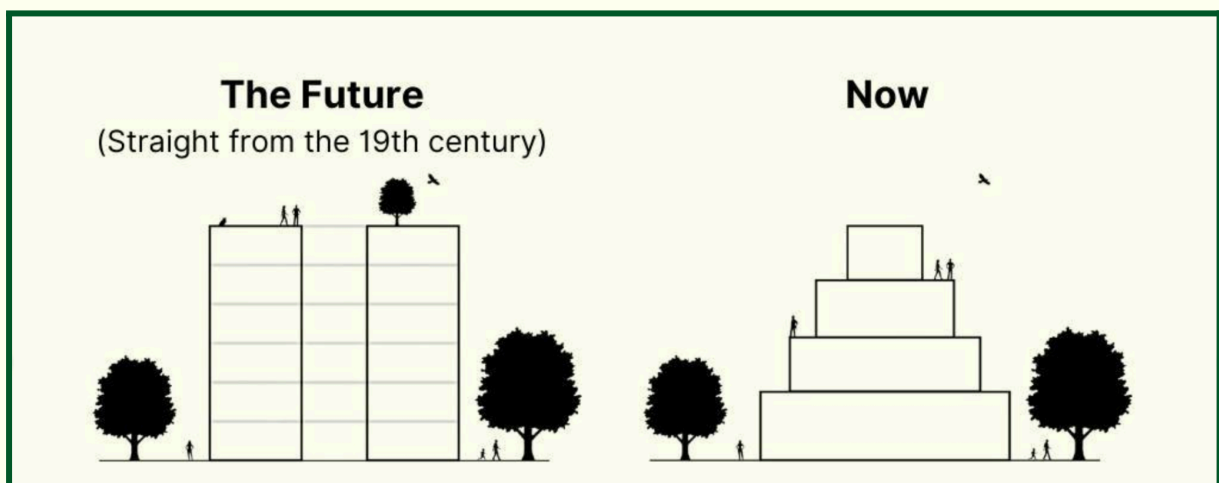
Key points

- Upper-level setbacks are expensive and emissions-intensive, and their benefits are not based on robust evidence.
- Boxy building shapes are simpler and more efficient than their equivalent designs with setbacks. Planning forces unnecessary complexity.
- Heritage restrictions make renewal and retrofit very difficult, including blocking the installation of solar panels, split systems, and more.
- The Victorian planning system puts heritage concerns on equal-footing with climate concerns. This is inappropriate, and a hierarchy of concerns should be established within future legislation.

Restrictive zoning is not the only part of the planning system creating worse climate outcomes for Victorians. Where restrictive zoning affects the most important part of climate-resilient development—where the thing gets built—there are other parts of the planning system that lead to worse climate outcomes for *what* gets built.

Here, we'll primarily focus on two key sets of climate issues created by arbitrary planning rules: upper-level setback requirements, and heritage protections.

Case study: upper-level setbacks



Putting it simply: buildings with a traditional “boxy” shape are simpler and cheaper to build and maintain, while more complex-shaped buildings are the exact opposite.¹²

The more upper-level setbacks required, the more complex the building foundations, the waterproofing, the services, infrastructure, and more. All these factors add up and not only significantly increase construction costs but also worsen long-term building performance.

Research also shows that setbacks—via the extension of internal floor slabs—often cause buildings to lose thermal efficiency due to thermal bypassing.¹³ While some advocates for upper-level setbacks claim that passive solar heating is a key benefit during colder seasons, there is little empirical evidence to suggest that this provides an on-balance benefit to inhabitants.

In fact, the opposite is true: apartments in a building directly and fully beneath the apartment above benefit from having the equivalent of a fully insulated ceiling, which reduces winter heat losses and summer heat gains by up to 35%.¹⁴

Research from the City of Toronto Planning and Development Department demonstrated that the elimination of setbacks would lead to “the greatest reductions in both embodied and operational carbon and have the additional benefit of simplified structures and envelopes – a move that would allow a wider range of structural materials to be employed and greater energy efficiency in envelope systems”.¹⁵

There are two arguments given in favour of setbacks: wind tunnelling, and overshadowing. We will address both below.

Mitigation of wind tunnelling via setbacks is only significant for buildings more than 70 metres tall.¹⁶ Meanwhile, most upper-level setbacks in Melbourne start at around 11 metres.

Another notable argument in favour of upper-level setbacks concerns overshadowing and sunlight access. Current controls operate under the assumption that the most important goal of the planning system is to minimise shade and maximise sunlight. While certainly it is important that people are able to access direct sunlight, the assumption that shade is de facto bad should not be taken for granted—especially in a

¹² [In Praise of Dumb Boxes](#) – Mike Eliason; August 22, 2018

¹³ [Thermally Broken Balconies Report: Alternative Strategies for Low Carbon Buildings](#) – March 31, 2022

¹⁴ [Energy Smart Housing Manual](#) – Sustainability Victoria, 2020

¹⁵ Comparative Carbon Emissions of Mid-Rise Buildings – City of Toronto Planning Department,

¹⁶ [The science of wind tunnels – where and why those harsh winds strike](#) – Avory Brookins; March 9, 2015

city so commonly overcast, and a reality where heat, rather than cold, is the much greater threat to urban public health.¹⁷

The sum of the evidence above is as follows: in terms of both money and emissions, setbacks cost more to build and to maintain. Wind tunnelling effects are irrelevant to the missing middle densities we advocate for at YIMBY Melbourne, and sunlight's assumed supremacy should be questioned in light of incoming climate realities.

Upper-level setbacks are a clear example of a planning policy not built on a solid base of evidence, and which should be fully repealed.

Case Study: heritage protections

Our current planning system weighs historic preservation above the need to retrofit homes to be more energy-efficient and climate-resilient, creating significant barriers in the mission to increase our city's preparedness for climate change.

This obsession with heritage-at-all-costs plagues planning systems across the anglosphere. Research from England found that their cumulative domestic energy consumption for 2006–2013 would have been 3% lower—a £5.1 billion social cost of carbon—if there weren't historic preservation regulations.¹⁸ This highlights the scale at which older historic buildings fail to meet the higher energy efficiency standards necessary to create a more sustainable future.

Even more concerning is that there is already precedent in Victoria for heritage considerations to outweigh minimal standards for renters, such as minimal natural light and usable kitchen requirements.¹⁹ While built-form heritage is important to Melbourne, it needs to be considered in balance with other societal needs, such as sustainability and minimal housing standards. Right now, there are rumours that Melbourne's councils are considering loosening the restrictions on solar panels on heritage-protected buildings. This would be a move in the right direction—however, there is more that needs to be done.

Clear provisions need to be introduced, allowing the installation of insulation improvements such as double-glazed windows, as well as more permissive rules regarding the installation of fixed appliances such as energy-efficient reverse-cycle air conditioners.²⁰

Reverse cycle air conditioners and hot water heat pumps are widely considered key technologies needed to achieve the residential switch to clean electric renewable

¹⁷ [City of shadows](#) – Alex Bozicovic; December 6, 2023

¹⁸ [The energy costs of historic preservation](#) – Hilber et al.; October 2017

¹⁹ [Minimum standards](#) – Tenants Victoria

²⁰ [Air Conditioners and Heritage Overlays](#) – City of Port Phillip

energy, and as such are currently being subsidised by the State Government through the Victorian Energy Upgrade program.²¹

While still being considered by the State Government, exemptions within the new minimal rental standards would potentially allow heritage-listed properties to avoid installing split systems to the permitting process and added compliance restrictions pushing up costs.²² This is unacceptable. A planning system in which heritage concerns and climate resilience concerns are considered on equal footing is an unserious system.

Our current heritage system treats all heritage as more or less the same, regardless of the era it is from, or the reason for its listing. If large portions of our city are going to be frozen in amber, then there have to be permissive and clear guidelines for each era protected, in order to enable better retrofitting. Furthermore, heritage protected on non-aesthetic grounds should be exempt from needing permits for simple climate mitigation work like the installation of air conditioning units and solar panels.

We detailed this in our *2023 Melbourne's Missing Middle* report, as below:

Melbourne's ageing housing stock presents significant challenges for emissions reduction, as a majority of existing homes fall far short of modern energy efficiency standards.

Heating and cooling accounts for nearly 40% of the average household's energy use, with older homes requiring far more energy to regulate temperature.²³ This problem is felt most acutely within our existing rental stock. While homeowners can utilise a suite of energy efficiency improvement programs and subsidies, renters are at the mercy of their landlords. Better Renting's recent report, *Power Struggles: Renting in Winter*, highlights the utterly inadequate energy performance of our rental stock: 90% of Victorian rentals measured had indoor temperatures below 18°C—the World Health Organisation's recommended minimum indoor temperature.²⁴

With Melbourne's rental vacancy rate as low as 1.1%, renters' bargaining power is limited, all but forcing them to accept substandard environmental conditions and increased energy bills in older buildings.²⁵

In recent years, the Victorian and Federal Governments have made vast improvements to the standards for new builds through the Better Apartment Design Standards and the National Construction Code respectively. As it is

²¹ [Victorian Energy Upgrades for Households](#) - State Government of Victoria

²² [Minimum Standards](#) - Tenants Victoria

²³ [Heating and Cooling](#) - Your Home

²⁴ [Power Struggles: Renting in Winter](#) - Barrett, B, S Clarke and J Dignam; September 2023

²⁵ [SOM Research - Property - Residential Vacancy Rates - Melbourne](#)

much easier to legislate and verify the quality of new builds than existing builds, one of the most cost-effective ways for the government to enable renters to access more environmentally friendly housing stock is to simply allow more homes of a modern standard to be built where people want to live.

The inherent handcuff of heritage protection, however, is the huge proportion of the protected single story and stand-alone houses located within the well serviced inner and middle suburbs of our cities. As this submission outlines, the most significant hindrance to climate resilience is our current planning scheme favouring this building typology over middle-density, efficiently planned walkable cities.

Recommendations:

2. Remove all upper-level setback requirements for buildings less than 76 metres tall across the Victorian planning scheme.
3. Reform heritage protections to permit easier retrofitting, including the installation of double glazed windows, split-system heating, and solar panels.
4. Reform the planning system to establish a hierarchy of considerations, such that climate, housing quality, and housing supply concerns outweigh those of heritage and neighbourhood character.
 - a. Reassess all planning rules against this reformed hierarchy of considerations.

Conclusion

Restrictive zoning is a key contributor to climate risk for Melbourne and Melburnians. Urban sprawl and its associated increases in risk is not an inevitability—rather, it is the direct result of a set of distinct policy choices. These choices have prioritised a loud minority of opinionated Victorians over the wellbeing of all others—pushing poorer people out of our city and away from climate-resilient infrastructure and housing.

Meanwhile, arbitrary planning controls such as upper-level setbacks and heritage protections have contributed to the low overall quality of Victoria's housing stock. Upper-level setback rules have forced builders to construct substandard new housing, while the overapplication of heritage protections has led to the preservation of substandard old housing.

This submission by no means contains an exhaustive list of our state's bad planning rules. What YIMBY Melbourne hopes to have illustrated within this submission is that the planning system has for too many years gone unexamined, is built on false premises and shaky evidence, and does not in its current form serve the majority of Victorians.

Implementing the recommendations within this submission would be a fantastic first step in creating a more equitable and climate-resilient state. For further recommendations regarding planning reform and climate benefits, please refer to YIMBY Melbourne's other reports, *Melbourne's Missing Middle*, *Missing Middle Housing Targets*, and our forthcoming exhaustive report on the state's heritage system.