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Infrastructure resilience and built environment:

Land Use Planning:

Conduct Climate Risk Assessment:

Emergency Preparedness:

Environmental Impact:

Economic Impacts:

Policy and Governance:

Community Engagement:

Technological Solutions:

Energy Transition:

12 June 2024

Legislative Council Environment and Planning Committee
Inquiry into Climate Resilience
Parliament House, Spring St
EAST MELBOURNE VIC 3002

By upload to Inquiry website.

Dear Committee Chair, Mr Batchelor

RE: INQUIRY INTO CLIMATE RESILIENCE

The Council Alliance for a Sustainable Built Environment (CASBE) congratulates the Victorian Government on their Inquiry into Climate Resilience. We welcome the opportunity to provide the following response highlighting the risks to Victoria's built environment and infrastructure and barriers in the planning system as it relates to its adaptation to, preparation for, and mitigation of climate change impacts.

BACKGROUND

CASBE is an association of Victorian councils committed to ensuring future generations can enjoy a sustainable built environment, by seeking sustainable design outcomes through the statutory planning / development application approvals process. CASBE member councils cover 80% of Victoria's population. You can find a complete list of our 42 members on our website.¹

CASBE's vision is: *Metro cities, regional cities and towns are sustainable, thriving, and operate in harmony with social and ecological systems.*

CASBE provides a forum for the exchange of information, and ideas on innovation and best practice in Environmentally Sustainable Development (ESD). Our local, ground-up approach has resulted in collaborative local government led action, broad scale positive change to Victoria's built environment, and a significant reduction to its consequent environmental impacts.

¹ <https://www.casbe.org.au/who-we-are/membership/>

Local ESD Policy

A key aspect of CASBE's work has been to facilitate the introduction of local planning policy that requires ESD design strategies to be considered by the community when undertaking development projects. There are now 27 Victorian Councils ² with this local ESD policy for buildings, and even more utilising the methodology and purpose-built tools aimed at delivering ESD outcomes through the planning system. The ESD local policies lay a solid foundation for climate responsive building designs, but they do not go far enough to support zero carbon emissions and climate resilient buildings.

Built Environment Sustainability Scorecard (BESS)

CASBE has developed the *Built Environment Sustainability Scorecard (BESS)* ³ - 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 ⁴ – an approach adopted by 34 Victorian councils subscribing to BESS.

BESS was designed to help applicants and councils meet the ESD local policies which go some way towards climate resilient building through energy efficiency and other sustainable design measures.

Elevating Targets amendment

In July 2022, twenty-four Victorian councils, supported by CASBE and the Municipal Association of Victoria (MAV), lodged a request for an amendment to the Victorian planning scheme to elevate sustainability requirements for new buildings. The goal of the project is to better protect the natural environment, reduce resource and energy consumption, and support the health and wellbeing of future occupants. ⁵

Under the proposed changes, new developments would:

- Be more resilient to changing climate impacts.
- Produce net zero carbon emissions.
- Reduce household bills by making buildings more energy efficient.
- Provide a healthier and more comfortable environment for building occupants.
- Better manage water quality, use and collection.
- Protect and enhance greening and biodiversity.

² <https://www.casbe.org.au/what-we-do/state-local-planning-policy/>

³ <https://www.bess.net.au/>

⁴ <https://www.casbe.org.au/what-we-do/sustainability-in-planning/>

⁵ <https://www.casbe.org.au/elevating-esd-targets/>

The Elevating ESD Targets Amendment outlines design strategies to address the following key environmental issues:

- Climate Resilience
- Operational Energy
- Embodied carbon
- Sustainable Transport
- Green Infrastructure
- Integrated Water Management
- Indoor Environment Quality

Sustainable Subdivisions Framework

The Sustainable Subdivisions Framework (SSF)⁶ was developed as a state-wide replicable model through a collaboration of regional and growth area councils with a focus on greenfield subdivisions. The SSF seeks to mitigate the impacts of future climate projection scenarios, creating sustainable and liveable subdivisions that can adapt to the changing climate. There are currently 21 Victorian councils utilising the SSF, with the support of three shared services Sustainable Subdivisions Advisors across 18 of the councils.

⁶ <https://www.casbe.org.au/what-we-do/sustainable-subdivisions/>

INQUIRY INTO CLIMATE RESILIENCE

We note the detailed Terms of Reference for the Inquiry:

On 4 October 2023, the Legislative Council agreed that the Environment and Planning Committee will inquire into the main risks facing Victoria's built environment and infrastructure from climate change and the impact these will have on the people of Victoria, including how the Government is preparing for these impacts the barriers in upgrading infrastructure to become more resilient to the impacts, and the preparedness for future climate disaster events.

(a) the main risks facing Victoria's built environment and infrastructure from climate change and the impact these will have on the people of Victoria;

(b) how the Victorian Government is preparing for and mitigating the impacts of climate change on our built environment and infrastructure;

(c) the barriers facing Victoria in upgrading infrastructure to become more resilient to the impacts of climate change, including barriers in rebuilding or retrofitting infrastructure, including but not limited to, issues relating to insurance and barriers faced by local government;

(d) the adequacy of the current Victorian planning system as it relates to its adaptation to, preparation for, and mitigation of climate change impacts;

(e) what more could be done to better prepare Victoria's built environment and infrastructure, and therefore the community, for future climate disaster events; and

(f) whether further inquiries or investigation may be needed into other aspects of climate change adaptation and climate disaster preparedness in Victoria, noting that climate change will have far-reaching impacts on all aspects of Victorian life, including but not limited to biodiversity, human health, primary production, industry, emergency services and more, and that while these areas may overlap with the matters covered in this inquiry, they may also warrant further investigation in their own inquiries.

CASBE is pleased to provide the following response.

(a) the main risks facing Victoria's built environment and infrastructure from climate change and the impact these will have on the people of Victoria;

This inquiry highlights the importance of resilient intergenerational buildings and infrastructure. Incorporating improved performance outcomes and climate resilience design strategies into our built environment is a critical action to improve Victoria's resilience. **One of the main risks facing Victorians is that our legislative framework continues to allow the construction of buildings and infrastructure that are ill prepared for the scientifically predicted weather events that are likely to occur as a result of the changing climate.**

A resilient building design is one which considers the likely extreme weather events for that area and responds accordingly. For example:

- Increased heatwaves – the building is designed to be thermally comfortable during heat waves and in the event of a power outage.
- Power outage – the building is designed to remain functional during a heatwave with a power outage. This may include having the capacity to switch to the use of renewable resilient (eg off grid) power supplies.
- More extreme storm events – the building is designed to structurally withstand more extreme storm events.
- Coastal storm surge – buildings are structurally designed to withstand coastal storm surge or are prevented from building in at-risk areas.
- Drying and warming trend for Victoria – our buildings are able to capture and store rain water. As our climate dries, water security will become increasingly important. Rainwater tanks contribute to water security and management of flow during heavy rain events.

It will be necessary to retrofit many existing buildings to ensure they provide the shelter, thermal comfort and durability required to withstand the scientifically predicated weather events that are likely to occur as a result of climate change. There is a risk that some buildings will be unable to be retrofitted, or will be destroyed by extreme weather events before these retrofitting activities can occur.

To avoid the need to retrofit our future buildings, all new development must be designed and constructed with consideration of applicable climate risks. Planning and building policy must be based on the latest updated science and data to allow consideration of the impact of climate change.

The Victorian Government's *Built Environment Climate Change Adaptation Action Plan 2022–2026* identifies this issue. The plan states that:

"...new development must be built to factor long term resilient needs to avoid future adaptation."

and

"Given the built environment's long life, it is important to factor adaptation into planning and management to reduce the need for upgrades and retrofits."

CASBE supports these statements. The Elevating ESD Targets Planning Policy amendment put forward by 24 Victorian councils seeks to introduce planning provisions that improves the climate resilience of buildings, including strategies that improve the performance

of the building envelope, reduce urban heat, improve stormwater management and remove operational carbon emissions.

Improving the long-term affordability of housing

Victoria is not unique with our issue of decreasing housing affordability. Maintaining housing supply for Victoria's current and future population is of critical importance. However, housing affordability is a complex matter with a multitude of factors affecting supply. The pressures of a changing climate change will require greater environmental performance and resilience from our buildings, thus requiring a wider lens to the concept of 'affordability' than simply the up-front construction costs.

New buildings meeting the proposed Elevating ESD Targets standards would have the potential for multiple long-term cost-effective outcomes.

The long-term operational benefit of sustainable buildings

There is much evidence that efficient, sustainably design buildings reduce ongoing operational costs (eg lower energy and water bills) thus improving long-term affordability.⁷ This was supported by the state government's research into all electric homes, which attested to savings to energy bills of \$1,000 per annum in new homes, while reducing household emissions.⁸

We know that key design decisions are made prior to planning that influence the long-term impact of buildings. The State Government's work with the 7 Star Homes Program was based on the principle that early good design saves money on future energy bills. This is why the planning system has such an important role to play alongside other building regulations in delivering ESD outcomes.

Consumers will pay more for more sustainable buildings

There is evidence that the housing market is maturing and responding favourably to sustainable design features that not only save money operationally, but are likely to be more valuable on resale, as this *Domain Sustainability in Property Report 2022* suggests.⁹

Climate resilient building stock will be more affordable for longer

Buildings will need to be able to withstand hazards, maintain a liveable internal environment during periods of extreme weather events, and be affordable to operate and insure over the long term. A short-term view of housing affordability doesn't allow for quality and climate resilience considerations for future housing stock. The more efficient and resilient we build our buildings now, the less likely they will need to undergo subsequent retrofitting to ensure they are safe and affordable for occupants.

⁷ <https://www.yourhome.gov.au/buy-build-renovate/affordability>

⁸ <https://www.premier.vic.gov.au/new-victorian-homes-go-all-electric-2024>

⁹ <https://www.domain.com.au/research/domain-sustainability-in-property-report-1147058/>

Retrofitting and adapting existing buildings is expensive. We draw your attention to the recent report by the Australian Council of Social Service, *Funding and Financing Energy Performance and Climate-Resilient Retrofits for Low-income Housing*, which “explores mechanisms to support the delivery at scale of substantial energy performance and climate resilience retrofits to low-income housing in Australia before 2030”.¹⁰

At the moment, poorly designed buildings are impacting the most vulnerable in the community. The following examples highlight that we cannot afford NOT to deliver climate resilient housing.

Extreme Heat

It is of utmost importance that the buildings we are building today are able to withstand the extreme heat events that will occur with increasing frequency in the years to come. A new KPMG report has found that approximately 38% of Australians face high risk from extreme heat; and known as a silent killer, heatwaves cause an average of 3,000 deaths per year.⁵

Extreme heat events, caused by the changing climate, is resulting in a higher dependence on electricity cooling. This contributes to energy use.⁶ Research by the University of Sydney found significant evidence that prolonged extreme heat exposure has adverse effects on the physical, mental and social health and wellbeing of public housing residents as well as significant financial costs of cooling.⁷ These findings are not limited to public housing.

The Federal Government has recognised the importance of this research and committed \$5 million in grants for health-related climate research.⁸

A key design strategy to combat extreme heat is roof colour. A recent CSIRO report found that dark coloured roofs can add as much as \$700 to annual housing heating and cooling costs.⁹

Sea Level Rise and Storm Surge in Victoria

Flooding events across the country are a continual reminder of the serious social and environmental impacts of these extreme weather events. Research led by the Victorian Marine and Coastal Council (VMaCC) –*Economic Impacts from Sea Level Rise and Storm Surge in Victoria, Australia over the 21st Century* identifies the estimated economic losses associated with public and private land and assets over the 21st century from rising sea levels and more frequent and dramatic storm surge and flooding:

- 337 billion in 2100, or
- 2.68% of Victoria’s projected gross state product (GSP)¹¹

¹⁰ <https://www.acoss.org.au/wp-content/uploads/2024/02/ACOSS-Report-Funding-and-Financing-Low-income-retrofits-January-2024-.pdf>

¹¹ https://www.marineandcoastalcouncil.vic.gov.au/_data/assets/pdf_file/0030/665652/a1420184d6623d94a7f338f861671b6c68af15d5.pdf

Risks to existing infrastructure and built form

CASBE supports the MAV submission which goes into detail about the risks facing Victorians and our existing infrastructure and built form. We refer specifically to the following extract from the MAV submission:

“The potential impacts to communities vary greatly, ranging from disruptions to essential public services to health impacts, injury and loss of life. It is important to note climate risks will not affect every place and person the same way. Any efforts to mitigate and adapt to climate change must be tailored to address local vulnerabilities.

Victorian councils are responsible for managing \$140 billion of community assets and infrastructure, including roads, community buildings and parks, all of which are impacted by climate events and have a high cost for repair and maintenance³. Conservative first-pass economic assessments of the direct risks to council assets indicates that annual average damages are expected to increase by 150% by 2050 and 300% by 2100 under business as usual⁴.

As a result, councils have significant interest in undertaking mitigation and adaptation measures to protect our built environment and infrastructure from climate change.

While some progress has been made, more investment is needed to protect critical infrastructure and community assets. Damaged infrastructure is expensive and time-consuming for councils to repair, leaving communities disconnected and disrupted. Assessing, upgrading, (or repairing) and managing assets to a more climate-resilient standard is considered a priority for the sector, which will require a partnership approach between all levels of government. This approach should be undertaken proactively as well as opportunistically after natural disasters.”

Victorian Parliament’s Legislative Council Environment and Planning Committee, Inquiry into Climate Resilience, MAV Submission, May 2024

Recommendations for the Victorian Government:

- Adopt science-based targets for high level policy and align the planning system to the most up to date climate science.
- Support a public conversation about the complexities of housing affordability, and the long-term affordability of resilient building design.
- Actively support the development of policy options for housing affordability such as not for profit housing development, and housing policy that supports tenants.

(b) how the Victorian Government is preparing for and mitigating the impacts of climate change on our built environment and infrastructure;

More ambitious action is needed at the Federal and State Government level to effectively mitigate the impacts of climate change. The Victorian Government has set a target of achieving net zero emissions by 2045, while the Federal Government plans to reach net zero by 2050. Both these targets fall well short of the latest science which demonstrates Australia needs to strive for net zero by 2035 to keep warming at the safest levels now possible.¹²

Under the Roles and Responsibilities for Climate Change Adaptation in Australia agreed to by the then COAG Select Council on Climate Change in 2012, state governments are responsible for delivering adaptation responses in their areas of policy and regulation and encouraging climate resilience and adaptive capacity.

In 2022, the Victorian Government released seven sectoral Adaptation Action Plans, mandated under the Climate Change Act 2017, alongside six Regional Climate Change Adaptation Strategies.

This included the ***Built Environment Climate Change Adaptation Action Plan 2022–2026, 2022, Victorian State Government.***

CASBE commends the State Government for their preparation of the *Built Environment Climate Change Adaptation* and associated Action Plan for the 2022–2026 period.

The Plan is a welcome step forward in making our built environment more climate-resilient. However, progress under this plan is constrained because the proposed actions remain largely unfunded.

The plan provides critical guidance for consideration of climate change impacts in decision-making in planning our communities, engaging with at risk cohorts and communities, and planning for resilience and recovery. The adaptation actions are key to ensuring our built environment reduces devastating environmental, social and economic impacts of at-risk communities, by designing in protections early.

The plan provides robust actions to create a pathway for the State Climate Change Adaptation; with 19 recommended actions across the three areas of governance and regulation, place-based responses, and to harness economic, financial and legal tools as follows:

¹² https://www.climatecouncil.org.au/wp-content/uploads/2023/09/Mission-Zero_Updated-190923_IL_2.pdf

Governance and regulation actions	Place-based actions	Harness economic, financial and legal tools
Update planning provisions to respond to climate change.	Prepare measures to help local government update planning schemes to reflect climate.	Assess options to use economic tools to facilitate climate change adaptation outcomes.
Review bushfire provisions in planning schemes and building standards.	Support climate change adaptation, risk reduction, response and recovery plans for the most exposed communities.	Assess financial measures and insurance responses to support adaptation.
Update building standards relevant to flood, heatwaves and storm exposure.	Review strategic planning responses to elevated bushfire risk due to climate change.	Review legal mechanisms to support climate-resilient urban development.
Pursue opportunities for upgrades of existing building stock.	Support drought resilience planning for regional cities and towns.	
Examine strengthening energy infrastructure resilience including reviewing adequacy and robustness of existing frameworks through the Distribution Network Resilience Review.	Support development of place based resilient energy generation.	
Develop support programs for vulnerable persons and communities highly exposed to climate change impacts.		
Improve the skills and capacity of practitioners, industry and community organisations to respond to climate change.	Develop approaches for ongoing management of culturally significant and heritage places in risk-exposed locations.	
Extend spatial mapping and hazard exposure modelling.	Develop program options to support local climate adaptation initiatives.	
Support decision making by practitioners.		

CASBE supports the actions outlined in the adaptation plan above

Recommendations for the Victorian Government:

- Implement the actions outlined in the *Built Environment Climate Change Adaptation Action Plan 2022–2026* in their entirety.
- Implement the actions outlined in all sectoral Adaptation Action Plans developed by the Victorian Government.
- Implement the actions outlined in all regional Climate Change Adaptation Strategies developed by the Victorian Government.

(c) the barriers facing Victoria in upgrading infrastructure to become more resilient to the impacts of climate change, including barriers in rebuilding or retrofitting infrastructure, including but not limited to, issues relating to insurance and barriers faced by local government;

All aspects of council-owned and managed infrastructure are at risk of being damaged by the climate crisis, including community buildings and sport and recreation facilities.

Councils do not have the funding to rebuild or retrofit buildings and infrastructure. Upgrading drainage systems for example is key expense to improve climate resilience, that is beyond the current budget of local government and needs State Government funding and support.

The Special Building Overlay (SBO) is a land use instrument that identifies urban land liable to inundation by overland flows from the underground drainage system. To update a Special Buildings Overlay (SBO) councils must undertake a long and resource-intensive planning scheme amendment process. Many Victorian councils do not have resources to do this regularly and this increases climate risks related to flooding for both private property owners and local government. There are also some issues about consistency of engineering assumptions and the modelling used to generate updated SBO flooding maps. A streamlined process with a consistent set of engineering assumptions and a fast-tracked Ministerial amendment, such as using a 20 (4) amendment, would be beneficial in assisting improve resilience to flooding. The State Government resources involved in processing these amendments is also significant and long delays have been experienced. As rainfall intensity and frequency continues to change over time, the need to regular updates to the SBO mapping will also continue.

It is critically important that climate data, and information about scientifically predicted weather events is accessible to councils to support their initiatives in building climate resilience.

The MAV submission provides more detail on *Building Back Better* and changes to the Water Act. CASBE supports the content of the MAV submission.

Recommendations for the Victorian Government:

- Provide funding to support local government to retrofit and upgrade existing buildings and infrastructure.
- Create a streamlined framework for regular rapid updates to the SBO flood mapping to fast track the process and reduce resources for both State Government and local governments.
- Provide councils with access to consistent and up-to-date local and regional climate data and hazard assessments in line with the latest science.

(d) the adequacy of the current Victorian planning system as it relates to its adaptation to, preparation for, and mitigation of climate change impacts;

The current Victorian planning system is inadequate as it relates to preparing the Victorian built environment to adapt and mitigate climate change impacts.

A climate emergency has been declared across the globe amongst organisations, governments and the community. CASBE member councils have shown leadership in this area through declarations, zero carbon policies and the introduction of ESD planning policy.

CASBE acknowledges that we are facing a climate and biodiversity emergency and that urgent action needed to restore a safe climate to ensure a safe and just future for all. In an effort to strategically link our day-to-day work with a global safe climate goal, we have committed to supporting *Sustainable Development Goal 11 - SUSTAINABLE CITIES AND COMMUNITIES* and *Sustainable Development Goal 13 - CLIMATE ACTION* through our operational and strategic work.

It is this focus by CABSE member councils that has driven the Elevating ESD Targets project.

Elevating ESD Targets will support the transition to a climate resilient future.

The Elevating ESD Targets Planning Policy amendment seeks to introduce planning provisions that elevate sustainability requirements for new buildings, encourages a move towards net zero carbon development and supports the transition of our energy sector to renewables, areas of key importance to the State Government.

The proposed policy objectives cover many sustainability issues, however we draw your attention to two objectives that address zero carbon and urban heat as follows:

- *To ensure new development achieves net zero carbon emissions from operational energy use.*
- *To deliver development that reduces the urban heat island effect.*

The amendment also comprises a series of measurable standards to achieve these objectives, including:

Standard A3

All development should be designed to reflect the following hierarchy in achieving net zero carbon emissions from all operational energy use:

- *Design buildings to be all-electric;*
- *Design building orientation, envelope and openings to increase energy efficiency;*
- *Selection of energy efficient systems, equipment and appliances;*
- *Onsite generation of renewable energy;*
- *Purchase of offsite renewable energy.*

Standard F1

Provide at least 75% of the development's total site area with a combination of the following elements to reduce the impact of the urban heat island effect:

- *Green infrastructure.*
- *Roof and shading structures with cooling colours and finishes that have a solar reflectance index (SRI) of:*
 - *For roofing with less than 15 degree pitch, a SRI of at least 80.*
 - *For roofing with a pitch of greater than 15 degrees, a SRI of at least 40*
- *Water features or pools.*
- *Hardscaping materials with SRI of minimum 40.*

This policy is ready to test via the exhibition process.

While state-wide ESD reforms to Victoria's planning system are a necessary and equitable sustainability and resilience strategy for Victoria, we note that twenty-four councils lodged a request for authorisation of the *Elevating ESD Targets Amendment* with the Department of Transport and Planning in July 2022 and are still waiting for a response, almost two years later.

Our previous formal update from the Victorian Government regarding the amendment status was that a decision on the authorisation request was pending completion of Stage 2 of the ESD Roadmap, flagged for the end of 2023.

Victorian councils have undertaken detailed research into what needs to change in the Victorian planning system to effectively respond to climate change. This research identifies the need for planning policy that articulates mandatory minimum standards of Environmentally Sustainable Design.

We urge the Victorian Government to authorise the *Elevating ESD Targets Amendment* as soon as possible to enable councils to lead in transitioning to a climate resilient built environment.

Climate Change and Planning in Victoria

In 2021, CASBE partnered with the Victorian Greenhouse Alliances to commission a research report entitled *Climate Change & Planning in Victoria: Ensuring Victoria's planning system effectively tackles climate change.*¹³

This project arose as a result of the disconnect between high level policy positions on climate change, both by State and local government, and the day-to-day decisions that are being made. The key reasons for this disconnect between policy positions and decision-making in Victoria's planning system are outlined in the table below:

¹³ <https://www.casbe.org.au/resources/planning-information-sheets/>

Reason	Specifics
Lack of "trickle down" effect: Climate change targets and commitments at the state level have not informed decision-making within the built environment.	For example, despite adoption of a zero-emission target and commitments, these have not trickled down into planning schemes to inform day-to-day decision making on planning applications.
Insufficient inclusion of climate change in legislative obligations.	For example: <ul style="list-style-type: none"> – There is no clear direction in the Planning & Environment Act 1987 regarding the consideration of climate change in assessment and decision-making. – There is no legislative link between the Climate Change Act 2017 and Planning & Environment Act 1987.
Inconsistent application of policy due to lack of clarity and certainty in how specific aspects of policy should be applied.	For example: <ul style="list-style-type: none"> – In some areas, specific mechanisms (or permit triggers) to enable planners to assess known climate risks are lacking (eg. sea level rise impacts are not included in an overlay (which creates a permit trigger)).
Misalignment with scientific evidence.	Despite broad policy statements that planning should be aligned with the best available data and science, it is clear that planning is not currently doing this.
Siloing of built environment systems.	Within the current planning system, which seeks to avoid planning permit triggers unless a strong case can be articulated, there is an unavoidable reliance on the building system to deliver appropriate outcomes. This creates issues as identified above in the misalignment of ambitions, given the Building Code of Australia (BCA) is generally framed around minimum standards, and has yet to seriously address the efficiency improvements needed to support best practice responses to climate change.
Organisational consideration of climate change.	Delivery of climate responsive outcomes requires an understanding and embedding of this at all levels of decision-making.

While CASBE and other organisations, such as the Planning Institute of Australia (PIA), have undertaken significant work in delivering training and resources to local government planners, if the prioritisation of climate change considerations is not embedded in the mindsets of management levels, and ultimately at councillor level, the required changes to practice can be undermined.

Given the urgency with which climate change must be addressed at local and state level, and the need for transformational adaptation, there is a clear imperative to elevate climate change within the planning system to a position that is commensurate with the threat it poses.

The report highlights the following key findings:

Finding	Specifics
<p><u>Statutory implementation</u></p> <p>The influence of the Planning & Environment Act 1987 on day-to-day decision-making is largely felt through Victoria’s municipal based Planning Schemes (Planning Policy Framework and other Victorian Planning Provisions), which act as the key implementation tool.</p>	<p>The inclusion of content in the Planning Scheme is a critical step in allowing matters to be considered by decision-makers. Its application is frequently the primary influence on outcomes, particularly at lot and subdivision scale.</p>
<p><u>Key role of DTP as authorising authority</u></p> <p>For strategic planning, the role of the State in authorising and leading plays a more pivotal role, including through ‘non-statutory’ documents such as the Practitioners Guide.</p>	<p>The approach taken by Department of Transport and Planning (DTP) staff to any proposed changes to the schemes is highly influential and DTP also drives reform to the planning system (eg. SMART planning program) and is therefore critical to reforms to drive climate responsive planning.</p>
<p><u>Key role of VPA as authority in precinct delivery</u></p> <p>The Victorian Planning Authority (VPA) is the key authority in the delivery of Precinct Structure Plans (PSPs) and Urban Renewal Precinct Plans, both of which set the urban structure and key parameters relating to precincts.</p>	<p>The VPA is guided by its own legislation. Increasingly, there are other actors in the precinct planning space who also need to be considered, for example the Department of Transport and the Department of Jobs, Precincts and Regions.</p>

FOCUS AREAS FOR CHANGE

While the broader focus of this research was on changes that are relevant to the environment in which decision-makers operate, with a particular focus on decision-makers at local government level, a number of more specific focus areas have been identified to guide the recommendations of this report. They represent the link between the initiatives recommended and the barriers identified and encapsulate the findings of both the analysis and engagement, as follows:

Aligning planning with best practice and science

Planning Schemes currently speak to the need to identify at-risk areas using the best available data and climate change science. Specific policy benchmarks stated in the schemes therefore need to be consistent with the “best available data and climate change science.” These benchmarks and standards need to be kept up to date to provide clear guidance for decision-makers.

This is the purpose of the Elevating ESD Targets Planning Scheme Amendment – to lift the targets for the built environment to align with what science and experts are telling us.

Shifting the balance of decision-making

‘High level’ legislative obligations are important in driving change at the more fine-grained level. Planning is structured to flow from legislative requirements to objectives, which are then supported by the application of zones and overlays and the articulation of strategies. In turn, these are implemented by standards and guidelines. Failing to include, as part of legislative obligations, robust and comprehensive references to climate change, and to highlight the key role decisions made within the planning system play can compromise support for climate action.

How we live our lives is strongly influenced by the places we inhabit, and these are the remit of planning. Ensuring that these places are focused on the twin goals of adaptation and mitigation has the potential to make a significant contribution to global objectives in responding to climate change.

Supporting statutory decision-making

Statutory planners and other decision-makers need specific content in Planning Schemes to support them in delivering climate responsive outcomes. If there is no reference in the scheme, the ability to deliver particular outcomes is compromised and inconsistent, and relies more heavily on individual decision-making and capacity.

In addition, planning relies heavily on the presence of a permit trigger for there to be any relevant assessment of the appropriateness of an application. If there is not a permit trigger

which relates to the issue within the Planning Scheme, there is no opportunity for a decision to be made on the matter through the planning system.

Making climate change considerations explicit

In responding to climate change, planning needs to look to the longer-term impacts and requires greater consideration of the impacts on future generations. This is sometimes incompatible with other objectives of planning and with the interests and obligations of some decision-makers. Climate change considerations must be made explicit, or they will continue to be overlooked in favour of policy considerations that are more explicitly spelled out within Planning Schemes.

Supporting strategic decisions

Climate change needs to be more strongly integrated into the documents and frameworks. As a result, in some cases, work can be undertaken to plan for places like activity centres and land can be rezoned, without paying particular attention to the impact on either mitigation and / or adaptation goals. Improving the robustness of the integration with strategic planning sets the groundwork for long term responses.

Planning for climate resilient communities

Current planning practices at precinct scale, including huge areas of greenfield development, as well as more standard subdivisions, are failing to take into consideration the scale of change needed to standard practice. This is a key barrier, as once these foundations are set through the subdivision and precinct planning stages, they are very difficult to change or to retrofit. Many of these areas will still be developing when a net zero target is envisaged to be met.

Integrating climate change actions

Adopting integrated responses and avoiding 'silos' is critical to addressing climate change. A current lack of integration between planning and other areas of government addressing adaptation planning, across various portfolios and departments, has been identified as a barrier. In addition, the current practice of including references to large and complex Policy Documents to "consider as relevant", without explicitly extracting content relevant to planning and including this within Planning Schemes, means many key parts of government policy are being poorly applied through the planning system. Explicit attention is needed to integrate policy content on climate action into the planning system.

The report recommends a comprehensive suite of initiatives be implemented to enact whole of system planning reform. The prioritised initiatives are listed below, and the Committee's attention is also drawn to Initiatives 22, 25 and 24 which relate to CASBE programs:

- Initiative 22: Update Clause 56 to align with the findings of the CASBE led Sustainable Subdivisions Framework.
- Initiative 25: Include a Particular Provision/s that articulates mandatory minimum standards of Environmentally Sustainable Design in key areas such as energy efficiency, green infrastructure, electric vehicle readiness, etc.
- Initiative 34: Ensure that recent updates to the Victorian Planning Authority’s Precinct Structure Planning Guidelines are aligned with the findings of the Sustainable Subdivisions Framework.

Climate Change and Energy Legislation Amendment (Renewable Energy and Storage Targets) Bill 2023

We commend the State Government for the Climate Change and Energy Legislation Amendment (Renewable Energy and Storage Targets) Bill 2023 which received Royal Assent on 26 March 2024.¹⁴

The bill outlines proposed amendments to the Planning and Environment Act 1987, which includes:

- *Definitions: In section 3(1) of the Planning and Environment Act 1987 insert the following definition— "emissions reductions target means— (a) an interim emissions reduction target within the meaning of the Climate Action Act 2017; and (b) a long-term emissions reduction target within the meaning of the Climate Action Act 2017;".*
- *Objectives: After section 4(2)(d) of the Planning and Environment Act 1987 insert— "(da) to provide for explicit consideration of the policies and obligations of the State relating to climate change, including but not limited to greenhouse gas emissions reduction targets and the need to increase resilience to climate change, when decisions are made about the use and development of land;".*
- Changes to Climate Change Act and Renewable Energy Act.

CASBE notes that this responds to the following recommendation from the *Climate Change & Planning in Victoria: Ensuring Victoria’s planning system effectively tackles climate change* report:¹⁵

- Initiative 2: Seek an amendment to the Planning & Environment Act 1987 to provide clearer direction on the consideration of climate change in assessment and decision-making.

Responding to climate change is an existing purpose of Victoria’s planning scheme and a range of strategic priorities are including in the Planning Policy Framework to respond to this aspect of the purpose. Bushfire, flooding, sea level rise, erosion – all impacts of climate change - are all considered separately on a thematic basis within the planning scheme.

¹⁴ <https://content.legislation.vic.gov.au/sites/default/files/2024-03/601072bs1.pdf>

¹⁵ https://www.naga.org.au/uploads/9/0/5/3/9053945/final_report_-_climate_change_and_planning_in_victoria_-_november_2021.pdf

However, there is a lack of information requirements or clarity regarding what a statutory planner would consider when making a decision on applications. A climate responsive building design requires a range of design solutions. By way of example, the CSIRO State of the Climate report ¹⁶ suggests that “ongoing climate variability that will give rise to short-duration heavy-rainfall events at a range of timescales”. This will have significant implications for how drainage systems are designed to withstand an increasing incidence of flood events. Best practice Integrated Water Management practices will be vitally important into the future. How does a planner weigh this up against other competing priorities when assessing an application? Climate responsive design must be of the highest priority.

Immediate mitigation and draw down of carbon – buildings must play their role

While we consider the resilience of our building stock, we must also take urgent and immediate action to mitigate carbon emissions and contribute to draw-down efforts. We know that residential buildings are responsible for around 24% of Australia’s overall electricity use and more than 10% of carbon emissions. ¹⁷ Planning must play a role in concerted efforts to decarbonize our construction systems and support opportunities to draw down carbon.

There are many factors at play here, that go beyond the operational use of energy. Recent research ¹⁸ commissioned by AHURI suggests that there has been limited consideration of circular economy principles in the residential housing industry and its materials supply chain; and that:

- Current trends for increased use of concrete and expanding housing sizes are increasing the carbon intensity of housing.
- A material flow analysis (MFA) for the sector would enable a better understanding of materials flows through the construction and demolition phases over the life cycle of buildings.

The Infrastructure Design Manual Sustainable Infrastructure Guidelines ¹⁹ provide supportive guidance for 44 Victorian rural and regional councils who subscribe to the manual, which includes an inbuilt carbon calculator to assist with more sustainable materials choices and measure a more sustainable approach when compared to business as usual. Like this approach for infrastructure, buildings similarly need policy guidance and support.

Opportunities for locally available materials will be important not only to reduce transport emissions, but also to maintain housing affordability and future proof them from potential disruptions to supply chains associated with climate change and emergencies such as pandemics (as was highlighted during the COVID-19 pandemic).

¹⁶ <https://www.csiro.au/en/research/environmental-impacts/climate-change/state-of-the-climate>

¹⁷ <https://www.dceew.gov.au/energy/energy-efficiency/buildings/residential-buildings>

¹⁸ <https://www.ahuri.edu.au/sites/default/files/documents/2023-06/AHURI-Final-Report-402-Building-materials-in-a-circular-economy.pdf>

¹⁹ https://www.designmanual.com.au/assets/files/documents/Sustainable_Infrastructure_Guidelines/Sustainable_Infrastructure_Guidelines_V1.1_.pdf

Recommendations for the Victorian Government:

- Authorise the Elevating ESD Targets Amendment as soon as possible to enable councils to lead in transitioning to a climate resilient built environment.
- Introduce mandatory minimum climate responsive standards for buildings into the planning scheme **as a matter of urgency**. This could be achieved by progressing the Elevating ESD Targets Planning Scheme Amendment.
- Introduce new standards for buildings that will ensure new development achieves net zero carbon emissions from operational energy use **as a matter of urgency**. This could be achieved by progressing the Elevating ESD Targets Planning Scheme Amendment.
- Introduce detailed requirements for mitigating urban heat **as a matter of urgency**. This could be achieved by progressing the Elevating ESD Targets Planning Scheme Amendment.
- Introduce detailed requirements for embodied carbon for new development that aligns with developing national systems for measuring embodied carbon **as a matter of urgency**. This could be achieved by progressing the Elevating ESD Targets Planning Scheme Amendment.
- Implement the findings and recommendations of the *Climate Change & Planning in Victoria: Ensuring Victoria’s planning system effectively tackles climate change* report, in particular the following priority actions:
 - Initiative 1: Seek an amendment to Schedule One of the *Climate Change Act 2017* to include reference to decisions made in regard to amendments or the issue of permits under the *Planning & Environment Act 1987*.
 - Initiative 2: Seek an amendment to the *Planning & Environment Act 1987* to provide clearer direction on the consideration of climate change in assessment and decision-making. **This initiative has been actioned.**
 - Initiative 5: Update *Minister’s Direction No. 11 – Strategic Assessment of Amendments* and *Practice Note 46: Strategic Assessment Guidelines* for Planning Scheme amendments to ensure that Explanatory Reports prepared for every amendment include an explicit assessment against relevant climate change considerations including consistency with emission reduction targets over the life of any potential development, and any relevant adaptation measures.
 - Initiative 6: Document preferred practice for the delivery of climate responsive planning through new or amended Practice Notes.
 - Initiative 7: Establish principles, processes and the most appropriate mechanisms (i.e. Public Acquisition Overlay, land swap) to ensure there is a sound basis for equitable and strategic relocation in areas of unmitigated risk, and to allow this process to begin early.
 - Initiative 9: In addition to proposed updates to the Planning Policy Framework to embed emission reduction targets, include the explicit target of net zero emissions by 2050 as State policy.
 - Initiative 11: Replace references at Clause 11 to require that planning is to contribute to ‘net zero emissions outcomes’ rather than “energy efficiency”.
 - Initiative 14: Update all references to benchmarks to reflect a 100 year cycle (e.g. rather than plan for 2100, plan for 2125) and update relevant interim benchmarks (2040 to 2070).

- Initiative 16: Support updates to the Purpose of the Planning Policy Framework but require inclusion of specific reference to sustainability, 'having regard to climate change', or similar.
- Initiative 19: Apply relevant Overlays (Land Subject to Inundation and Floodway Overlay) to land affected by coastal inundation to provide permit trigger.
- Initiative 20: Integrate references to place-based Coastal Adaptation Plans and Integrated Water Management Plans proposed by various State Government programs into Planning Schemes to ensure they are activated as soon as adopted.
- Initiative 22: Update Clause 56 to align with the findings of the CASBE led Sustainable Subdivisions Framework (pending completion of pilot phase).
- Initiative 23: Update the Planning Policy Framework to more comprehensively address renewable energy generation in State Policy.
- Initiative 24: Update the Planning Policy Framework to more comprehensively address climate change hazards in State Policy.
- Initiative 25: Include a Particular Provision/s that articulates mandatory minimum standards of Environmentally Sustainable Design in key areas such as energy efficiency, green infrastructure, electric vehicle readiness, etc. This could be achieved by progressing the Elevating ESD Targets Planning Scheme Amendment.
- Initiative 26: Ensure that forthcoming updates to the Regional Growth Plans and their relevant background work integrates more explicit and spatially based recognition of climate change impacts and ensure these are considered in growth planning.
- Initiative 27: Update the Planning Policy Framework to more comprehensively address sustainable transport in State Policy.
- Initiative 32: Insert a new Clause in the Planning Policy Framework which recognises and addresses Green Infrastructure under Community Infrastructure (Clause 19.02).
- Initiative 34: Ensure that recent updates to the Victorian Planning Authority's *Precinct Structure Planning Guidelines* are aligned with the findings of the Sustainable Subdivisions Framework (pending completion of pilot phase).
- Initiative 35: Include requirements within the Victorian Planning Authority's *Precinct Structure Planning Guidelines* to require new communities to be net zero and designed appropriately to respond to climate change impacts.
- Initiative 36: Include explicit requirements for all decision-makers, under relevant legislation that all precinct planning should include the development of a Climate Change Response Plan which documents the estimated emissions for the precinct at full development potential, the anticipated impacts of climate change, and the measures that will be taken to deliver net zero and to integrate appropriate adaptation measures.
- Initiative 37: Update all coastal inundation data to align with scientific projections contained in the *Sixth Assessment Report* prepared by the Intergovernmental Panel on Climate Change (IPCC), having regard for any local variations identified through relevant Local Coastal Hazard Assessments.

(e) what more could be done to better prepare Victoria's built environment and infrastructure, and therefore the community, for future climate disaster events;

Principles for a resilient and adaptable built environment

The World GBC's flagship Health and Wellbeing global programme Better Places for People (BPFP) has partnered with the UN High-Level Climate Champions and C40 Cities to produce a *Climate Change Resilience in the Built Environment Guideline* which outlines the principles of a resilient built environment.

We provide an extract from this guideline here:

"The principles for a resilient and adaptable built environment are given at city, neighbourhood and building scale. They include:

City scale

- *Adopt land use policies and regulations to reduce/prevent development in high risk areas, and incentivise development in lower risk ones.*
- *Assess most vulnerable locations to focus priority interventions – pay close attention to vulnerable locations, particularly informal settlements, and aspire to transform slums into healthy, clean and safe communities.*
- *Assess the risk of climate change on physical assets and infrastructure and system stressors through future scenario modelling and risk assessments that consider the lifespan of an asset, including risk of stranded assets.*
- *Set building regulations or guidelines to target specific climate risk, eg. guidelines for better buildings can reduce storm damage. New building standards should be able to be resilient to changing extreme weather conditions.*

Community and neighbourhood scale

- *Protect and invest in natural resources, such as protecting ponds, lakes, and rivers nearby from over-extraction and pollution, and investing in water storage for emergency situations. Sustainable drainage solutions and green infrastructure techniques, such as planting moisture-loving plants and trees and installing permeable hard surfacing to absorb excess water that can support resource management, for example by allowing infiltration to support groundwater levels.*
- *Consider community scale-built asset upgrades and retrofit to improve resilience of community assets in case of severe climate events, such as community level master-planning to implement passive shading techniques, including narrow streets to create shade, expanding urban tree cover to combat urban heat island impacts and fire breaks to act as a buffer between natural and residential zones.*
- *Plan community emergency hubs that will provide access to safe space and services during extreme weather events, and prioritise establishing community protocols and maintaining evacuation pathways.*

Building scale

- *Implement passive design and retrofit techniques – to mitigate extreme heat – northerly orientations, building or adding semi-permanent shading devices, deciduous tree shading,*

shutters, light colour roofs, overhangs and utilising thermal mass, and avoid large volumes of glazing (on south or north-facing aspects and facades depending on the global north or south regions), or to mitigate extreme cold – capture residual heat with thermoelectric generators and heat exchangers, install passive systems including rooflights and reflective surfaces to increase solar gain, or increase air tightness or wall cladding and glazing insulation and quality to reduce heat loss.

- *Adopt backup strategies at building scale in case of extreme weather events such as off-grid, decentralised and resilient energy supply.*
- *Design for durability, disassembly and maintenance, such as planning for climate appropriate structures and urban layouts to prevent damage, considering techniques in which the building can withstand floods, fire, storms, heat waves, and other climate change events.”²⁰*

State land use planning policy has the potential to respond to these principles, in particular:

- Adopt land use policies and regulations that prevent development in high-risk areas.
- Introduce detailed ESD policy for buildings to ensure thermal comfort during extreme heat events.
- Introduce light coloured roof policy to mitigate the urban heat island effect.
- Introduce detailed policy that supports buildings and urban layouts to withstand extreme weather events.

Recommendations for the Victorian Government:

- Adopt land use policies and regulations that prevent development in high-risk areas.
- Introduce detailed ESD planning policy for buildings to ensure thermal comfort during extreme heat events. [This could be achieved by progressing the Elevating ESD Targets Planning Scheme Amendment.](#)
- Introduce light coloured roof planning policy to mitigate the urban heat island effect. [This could be achieved by progressing the Elevating ESD Targets Planning Scheme Amendment.](#)
- Introduce detailed planning policy that supports buildings and urban layouts to withstand extreme weather events.

(f) whether further inquiries or investigation may be needed into other aspects of climate change adaptation and climate disaster preparedness in Victoria, noting that climate change will have far-reaching impacts on all aspects of Victorian life, including but not limited to biodiversity, human health, primary production, industry, emergency services and more, and that while these areas may overlap with the matters covered in this inquiry, they may also warrant further investigation in their own inquiries.

CASBE supports the points made in the submission by the Municipal Association of Victoria to this item.

²⁰ https://www.c40knowledgehub.org/s/article/Climate-change-resilience-in-the-built-environment-Principles-for-adapting-to-a-changing-climate?language=en_US

Please find following a summary of all recommendations made in this submission:

Recommendations for the Victorian Government:

- Adopt science-based targets for high level policy and align the planning system to the most up to date climate science.
- Support a public conversation about the complexities of housing affordability, and the long-term affordability of resilient building design.
- Actively support the development of policy options for housing affordability such as not for profit housing development, and housing policy that supports tenants.
- Implement the actions outlined in the *Built Environment Climate Change Adaptation Action Plan 2022–2026* in their entirety.
- Implement the actions outlined in all sectoral Adaptation Action Plans developed by the Victorian Government.
- Implement the actions outlined in all regional Climate Change Adaptation Strategies developed by the Victorian Government.
- Provide funding to support local government to retrofit and upgrade existing buildings and infrastructure.
- Create a streamlined framework for regular rapid updates to the SBO flood mapping to fast track the process and reduce resources for both State Government and local governments.
- Provide councils with access to consistent and up-to-date local and regional climate data and hazard assessments in line with the latest science.
- Authorise the Elevating ESD Targets Amendment as soon as possible to enable councils to lead in transitioning to a climate resilient built environment.
- Introduce mandatory minimum climate responsive standards for buildings into the planning scheme **as a matter of urgency**. This could be achieved by progressing the Elevating ESD Targets Planning Scheme Amendment.
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- Introduce detailed planning policy that supports buildings and urban layouts to withstand extreme weather events.

[REDACTED]

Yours sincerely

[REDACTED]

Natasha Palich
CASBE Executive Officer

CASBE member councils include:

City of Ballarat	Hepburn Shire Council	City of Moonee Valley
Banyule City Council	Hobsons Bay City Council	Mornington Peninsula Shire Council
Bass Coast Shire Council	Hume City Council	Mount Alexander Shire Council
Bayside City Council	Indigo Shire Council	Murrindindi Shire Council
Boroondara City Council	City of Kingston	City of Port Phillip
Brimbank City Council	Knox City Council	City of Stonnington
Cardinia Shire Council	Manningham City Council	Strathbogie Shire Council
Darebin City Council	Maribyrnong City Council	Warrnambool City Council
East Gippsland Shire Council	Maroondah City Council	Whitehorse City Council
Frankston City Council	City of Melbourne	City of Whittlesea
City of Glen Eira	City of Melton	City of Wodonga
City of Greater Bendigo	Merri-bek City Council	Wyndham City Council
City of Greater Dandenong	Mitchell Shire Council	City of Yarra
City of Greater Geelong	City of Monash	Yarra Ranges Council

The *Climate Change & Planning in Victoria: Ensuring Victoria's planning system effectively tackles climate change* report was prepared by Hansen Partnerships for:

- Council Alliance for Sustainable Built Environment (CASBE)
- Central Victorian Greenhouse Alliance (CVGA)
- Eastern Alliance for Greenhouse Action (EAGA)
- Goulburn Murray Climate Alliance (GMCA)
- Northern Alliance for Greenhouse Action (NAGA)
- South East Councils Climate Change Alliance (SECCA)
- Western Alliance for Greenhouse Action (WAGA)

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