



Considering Climate Change in Land Use Planning Decisions

Urban Planning and Development Checklist
March 2026

Introduction

Melbourne Water will use the Shared Socio-Economic Pathway 3.0–7.0 2100, 1% AEP flood level as the standard design flood level for all new stormwater and riverine flood modelling for land use and development planning. Sea Level Rise Planning already uses the 2100.

Why is this important?

Victoria's planning system is evolving to address increasing climate risks—in particular flooding and sea-level rise. As a developer, it is important to understand how these changes affect land use, approvals, and long-term asset resilience.

Planning and Environment Act 1987 (the Act)

The Act includes a planning framework objective to consider 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. The Act sets out Melbourne Water's duties as a referral authority (S. 14A) and provides for the opportunity to impose conditions if a permit is to be granted or to object to an application (S. 56).

Ministerial Direction 22 – Climate Change Considerations

This Ministerial Direction mandates that planning authorities in Victoria must consider climate change impacts when preparing planning schemes or amendments. This includes minimizing greenhouse gas emissions by prioritizing urban renewal, supporting public and active transport, and enabling renewable energy infrastructure.

Authorities must also enhance resilience to climate-related natural hazards like bushfires, floods, and heatwaves by avoiding risk-prone development and incorporating protective design measures. These considerations must be documented in a climate change consideration report and explanatory statement. Exemptions may be granted by the Minister for Planning under certain conditions.



Main cover image: Jo Armao, Nine publishing
Cover image (bottom): Nine Publishing

Victoria Planning Provisions (VPP)

State Planning Policy, in particular Clause 13.01 of the VPP, has been updated to strengthen climate change considerations in land use planning. A key strategy of this clause is to identify at risk areas using the best available data and climate change science.

Other key strategies include:

- **Clause 11 Settlement:**
Promotes net zero emissions, integrated water management, and climate adaptation.
- **Clause 11.02-2S Structure Planning:**
Requires consideration of climate hazards, sustainable transport, and renewable energy in precinct and structure plans.
- **Clause 13.01-1S Natural Hazards and Climate Change:**
Directs population growth and development to low-risk locations, and site and design development to minimize risk to life, health, property, the natural environment and community,
- **Clause 13.01-2S Coastal inundation and erosion:**
Plan for sea level rise of not less than 0.8 metres by 2100 and avoid use and development in areas vulnerable to coastal inundation and erosion.
- **Clause 13.01-3S Urban Heat:**
Support development that contributes to cooler urban environments and cooling design responses, and encourage the use of alternative water resources such as recycled water, stormwater and rainwater to support canopy tree and vegetation growth.
- **Clause 13.03-1S Floodplain management:**
Avoid intensifying the impact of flooding through in appropriately located use and development, and locate emergency and community facilities outside the 1 in 100 year (1% annual exceedance probability (AEP) floodplain and, where possible, at levels above the height of the probable maximum flood.
- **Clause 15 (Built Environment):**
Encourages environmentally sustainable design (ESD) in buildings and subdivisions

The Flood Management Strategy for Port Phillip and Westernport (2021–2031)

The strategy outlines a collaborative, region-wide approach to managing increasing flood risks driven by climate change and urbanisation. It sets a long-term vision for flood resilience through improved information sharing, community empowerment, integrated infrastructure planning, and coordinated emergency response and recovery, supported by two five-year action plans and a robust governance and monitoring framework. The Action Plan commits to a 2100 high emissions scenario 1% AEP for land use planning and modelling and mapping new drainage schemes in greenfield areas.

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Flood Risk and Planning Controls

Melbourne Water plays a critical role in land use planning by providing flood mapping and expert advice to inform flood overlays and planning schemes across Victoria. Its flood mapping is underpinned by updated hydrological and hydraulic modelling that aligns with the Australian Rainfall and Runoff 2016 guidelines and incorporates the latest climate projections from the Victorian Climate Science Report 2024. Melbourne Water will use the 2100 1% AEP flood information with climate factors (Shared Socio-Economic Pathway 3.0–7.0) as the applicable design flood level for decision making once final publication has occurred.

Flood overlays identify areas prone to flooding and guide appropriate development responses. Within these designated areas, planning controls may require applicants to undertake flood risk assessments, adhere to minimum floor level requirements, and prepare stormwater management plans to ensure developments are resilient to current and future flood risks. An assessment may deem a proposal inappropriate resulting in an 'objection' or recommendation to refuse by Melbourne Water.

Flood overlays identify areas prone to flooding and guide appropriate development responses

Key Considerations for Developers

Unlike public infrastructure which may be upgraded overtime, the flood performance of land use and development is determined for long periods at a time. For greenfield development, decisions can set the foundations and flood performance of places in perpetuity.

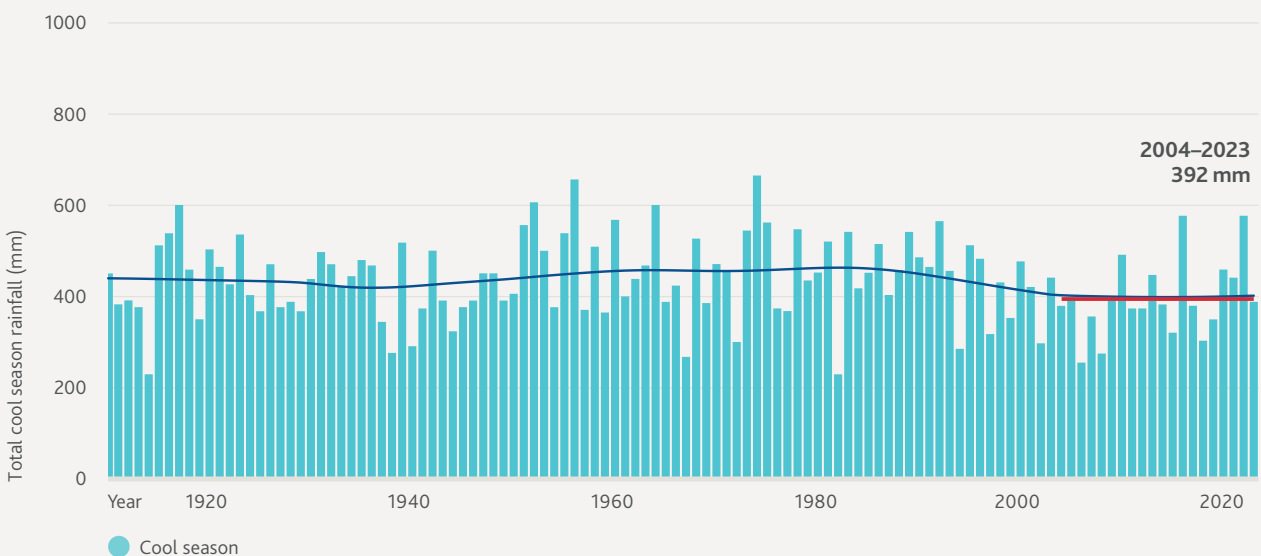
In selecting sites for development, areas with high flood hazard should generally be avoided unless appropriate mitigation measures can be implemented. Where development is proposed in flood-prone locations, design responses must consider safe access/egress, incorporate elevated floor levels to reduce flood risk, alongside permeable surfaces and water-sensitive urban design (WSUD) principles to manage stormwater sustainably.

Early engagement with local councils and relevant referral authorities—such as Melbourne Water—is essential to ensure flood risks are appropriately addressed and planning requirements are met. Strategic planning proposals must also demonstrate climate resilience, reflecting contemporary flood modelling and future climate scenarios to support long-term land use sustainability.

Climate Trends Affecting Development

Climate trends are increasingly influencing land use planning and development decisions across Victoria. While average annual rainfall may be declining, short-duration rainfall events are becoming more intense, increasing the risk of flash flooding and placing greater pressure on stormwater infrastructure.

Observed declines in Victoria's cool season rainfall



Graph Source: Victoria's Climate Science Report 2024 (Department of Energy, Environment and Climate Action).

Another example is sea level rise, which presents long-term inundation risks for coastal developments, requiring careful consideration of site elevation, access and isolation risks, erosion potential, and adaptive design strategies.

These climate-driven challenges underscore the importance of integrating resilience into all stages of planning and design.

Planning Ahead – Opportunities and Tools for Developers

Tools and Resources

A range of tools and resources are available to support climate-responsive planning and flood risk management.

Victoria’s Future Climate Tool provides location-specific climate projections, enabling planners and designers to assess future risks and incorporate adaptation strategies into development proposals.

For flood modelling, the ARR webpage offers the latest rainfall and runoff data aligned with national guidelines, supporting accurate and up-to-date assessments of flood exposure.

Additionally, VicPlan is a key resource for identifying relevant planning scheme overlays, including flood overlays such as the Special Building Overlay (SBO) and Land Subject to Inundation Overlay (LSIO), as well as other climate-related controls.

These tools collectively support evidence-based decision-making and help ensure development is resilient to current and future climate conditions. As always, engagement with local councils and relevant referral authorities—such as Melbourne Water—is essential throughout your project.

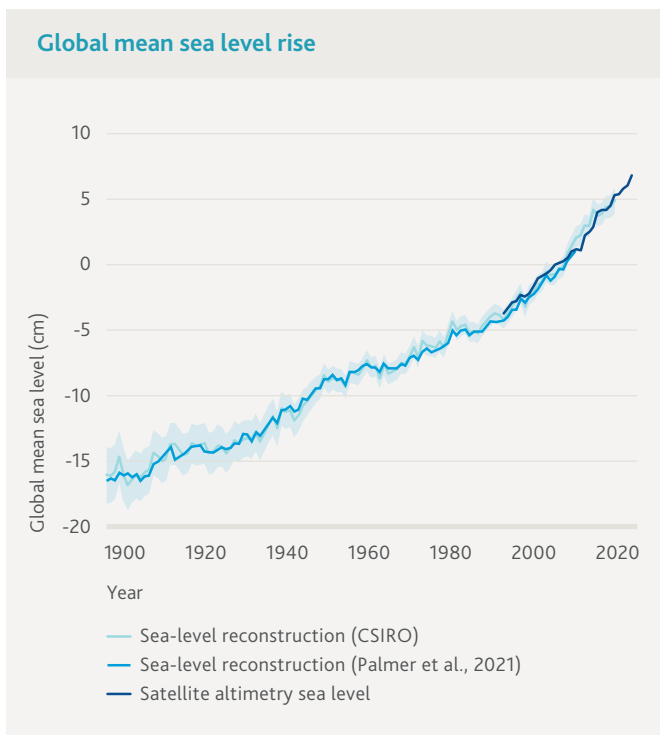
Strategic Development Opportunities

Strategic development opportunities across Victoria must be approached with a climate-resilient lens to ensure long-term sustainability and risk mitigation. In designated activity centers, where the state government aims to deliver new homes, developers are encouraged to assess flood and climate risks early in the planning process to avoid costly retrofits and ensure community safety.

Greenfield sites present opportunities for integrated planning, where flood mitigation infrastructure can be embedded from the outset alongside climate-adaptive design principles.

Meanwhile, urban renewal projects offer a chance to retrofit resilience into the existing urban fabric by upgrading drainage systems, improving building performance, and enhancing public realm features to withstand climate events such as flooding.

These strategic areas must be planned with a forward-looking approach that aligns with climate adaptation objectives and supports resilient growth.



Graph Source: Victoria’s Climate Science Report 2024 (Department of Energy, Environment and Climate Action).

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Engagement and Compliance

To support effective engagement and compliance in climate-resilient planning and development, early collaboration with key authorities (particularly Melbourne Water and local councils) is essential. This proactive and ongoing engagement can streamline approval processes and ensure that flood and climate risks are addressed from the outset.

Developers and planners should also be mindful of the growing expectation for climate-resilient housing, which increasingly influences both market demand and public support. Incorporating resilience into design and marketing strategies can enhance project viability and social license.

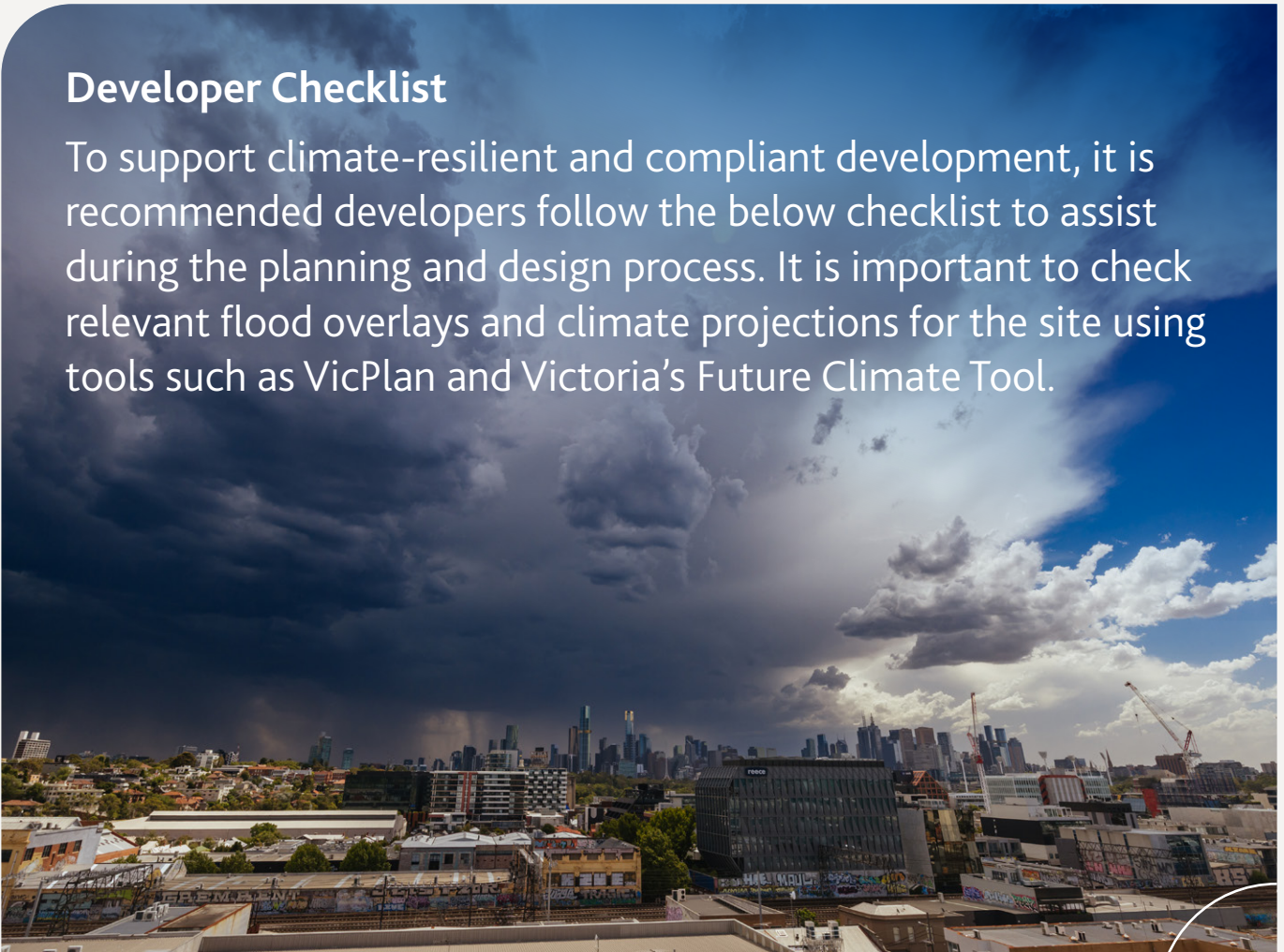
Furthermore, any planning and development activities must align with the relevant regulatory frameworks, including the Planning and Environment Act 1987, which establishes the legal foundation for land use and development in Victoria; the Marine and Coastal Act 2018, which promotes integrated management of coastal environments in response to climate change and population pressures; and the Victorian Floodplain Management Strategy, which outlines roles, responsibilities, and best practices for flood risk mitigation and community preparedness.

Together, these instruments provide a comprehensive basis for ensuring developments are both compliant and climate-adaptive.



Developer Checklist

To support climate-resilient and compliant development, it is recommended developers follow the below checklist to assist during the planning and design process. It is important to check relevant flood overlays and climate projections for the site using tools such as VicPlan and Victoria's Future Climate Tool.



Early engagement with referral authorities, including Melbourne Water and local councils, is essential to identify risks, particularly risk on-site and on access pathways, in order to streamline approvals. Design responses should incorporate water-sensitive urban design and flood mitigation measures, such as permeable surfaces, elevated floor levels, and integrated stormwater infrastructure.

Risk assessments must be based on the latest data from Australian Rainfall and Runoff (ARR) and the Victoria Climate Science Report 2024 (VCSR24) to ensure alignment with current modelling and future climate scenarios. Finally, all proposals should align with strategic planning goals and government housing targets, ensuring developments contribute to resilient, sustainable growth across Victoria.

- ✓ Check flood overlays and the 2100 flood levels for your site. Request your flood level certificate.
- ✓ Engage with referral authorities early, such as Melbourne Water's pre-development process.
- ✓ Incorporate WSUD and flood mitigation into design.
- ✓ Use ARR 4.2 data for risk assessments.
- ✓ Align with strategic planning goals and housing targets.