

Consideration of tolerable risk for natural hazards in land use planning guideline

February 2026

Introduction

This Guideline is the first step in responding to Action 7 of the *State Disaster Mitigation Plan 2024-2026* (SDMP) and is aimed at helping planning authorities undertaking strategic and local planning to consider “tolerable risk”. The Guideline does not replace existing natural hazard frameworks.

Natural hazards are becoming more frequent and intense due to climate change, with extreme floods, dangerous fire weather, and heatwaves impacting our communities and environment. Many parts of NSW are also expected to grow, with important new housing and infrastructure being delivered to continue to support the State’s long-term prosperity.

The NSW planning system plays an important role in managing and mitigating the impacts of natural hazards and is increasingly seeking to help build resilient places able to adapt to a changing climate.

Considering what level of risk is tolerable up-front in strategic and local planning processes can help reduce the costs and impacts from natural hazards. Appropriate merit-based planning decisions play a key role in delivering growth while helping avoid unacceptable impacts.

This Guideline seeks to help planning authorities consider the tolerability of natural hazard risks with the aim of continuing to support consistent and balanced merit-based decisions.

This Guideline will be periodically updated to reflect new approaches and information as our understanding of “tolerable risk” evolves.

State Disaster Mitigation Plan 2024-2026

The *State Disaster Mitigation Plan 2024-2026* is the NSW Governments’ strategy and action plan for reducing the risk of natural hazards to make communities safer, more resilient and better prepared to face disasters. The *State Disaster Mitigation Plan 2024-2026* includes 37 actions, including Action 7 that aims to support consideration of tolerable risk in land use planning.

Tolerable risk

Tolerable risk refers to a level of risk that is deemed to be acceptable (or tolerable) to the community, industry and government who bear that risk. It is informed by understanding the likelihood and consequence of relevant natural hazards and decisions about actions that can reduce those hazards' impacts.

The SDMP defines tolerable risk as *“the extent to which a disaster risk is deemed acceptable or tolerable depends on existing social, economic, political, cultural, technical and environmental conditions. In engineering terms, acceptable risk is also used to assess and define the structural and non-structural measures that are needed in order to reduce possible harm to people, property, services and systems to a chosen tolerated level, according to codes or “acceptable practice” which are based on known probabilities of hazards and other factors.*

Tolerable risk in land use planning does not aim to eliminate all risk. Rather, it seeks to provide a consistent way of balancing consideration of the consequences and costs of natural hazards and the benefits of development.

Tolerable risk in land use planning

Risk is one factor in a merit-based development assessment. This Guideline aims to help planning authorities when undertaking and developing strategic and local planning documents including State Environmental Planning Policies (SEPPs), Regional Plans, Local Strategic Planning Statements (LSPs), Local Environmental Plans (LEPs) and in precinct scale Development Control Plans (DCPs).

When seeking to understand a tolerable level of risk decision makers should consider:

- **Define exposure** – existing natural hazard information, including information about past natural hazard events and the impact of climate change
- **Examine vulnerability** – the local community's character and awareness of hazards to inform an understanding of the community's ability to cope with and recover from natural hazard events
- **Understanding merits** – define pros and cons of the development, economic benefits, risk transfer-community/ govt, capacity to adapt, impacted stakeholders, trade-offs.
- **Consider appropriate scale** – whether the proposal is site specific, local or regional development and where natural hazard risks are best considered in the planning system
- **Responding and decision making** based on the above considerations, what actions may be needed to manage or mitigate any unacceptable risks.

Considering tolerable risk up front in the planning process can help planning authorities better understand a proposal's overall risk profile in the context of settlement planning, future growth and larger scale development proposals, in turn helping ensure development occurs in areas and in ways where natural hazard risks are tolerable.

Understanding a place's tolerable risk

Attachment A aims to help planning authorities consider the above and ultimately make merit-based decisions that reflect an acceptable or tolerable risk. It sets out 5 factors, with suggested inputs and example insights that can support users to move through a process to consider tolerable risk for natural hazards in land use planning.

The level of assessment undertaken should be proportionate to the proposal's scale and likely impacts.

Tolerable risk will be considered as part of the development of the NSW Reconstruction Authority's Disaster Adaptation Plans (DAPs). Once DAPs are made, strategic land use planning will be required to consider DAPs in exercising relevant functions and decision making under the *Environmental Planning and Assessment Act 1979*¹.

Link with existing natural hazard assessment frameworks

The NSW planning system uses an all hazard, risk-based approach to assess natural hazard risks. The Guideline leverages and integrates established natural hazard management frameworks, such as the Flood Risk Management Manual, Coastal Management Framework and Planning for Bushfire Protection which quantify natural hazard risks and builds on existing land use planning related natural hazard risk guidance, including PS 24-001 *Update on addressing flood risk in planning decisions* planning circular.

Further information

For more information about resilience and natural hazard risk visit:

<https://www.planning.nsw.gov.au/policy-and-legislation/resilience-and-natural-hazard-risk>

¹ For more information visit the NSW Reconstruction Authority webpage

<https://www.nsw.gov.au/departments-and-agencies/nsw-reconstruction-authority>

Attachment A - Tolerable Risk Factors to consider

Factors	Inputs	Insights
<p>Defining exposure</p> <ul style="list-style-type: none"> existing natural hazard information, including information about past natural hazard events and the impact of climate change 	<ul style="list-style-type: none"> Type of natural hazard/s Risk exposure for each relevant hazard Existing risk assessment information (risk management processes) Existing risk mitigation options (risk treatments) Inherent vulnerabilities (shocks, stresses, trends) Capacity for safe evacuation 	<ul style="list-style-type: none"> Exposure below accepted threshold Exposure beyond accepted threshold Exposure to climate change Suitability of risk information Suitability of risk management plans
<p>Examining vulnerability</p> <ul style="list-style-type: none"> an understanding of the local community and their ability to prepare for, cope with and recover from natural hazard events 	<ul style="list-style-type: none"> Place-based characteristics (unique elements such as geography, key industries) Community based vulnerabilities (including socio-economic factors, values, behaviours) Long-term implications of vulnerabilities Unintended vulnerability increases (e.g. tree planting changing flood impacts) 	<ul style="list-style-type: none"> Place- based vulnerabilities Socio-demographic vulnerabilities Systematic vulnerabilities (including trends, likelihood for community to recover from a natural disaster)
<p>Understanding merits</p> <ul style="list-style-type: none"> the proposal's merits, including the proposal's direct economic benefits as well as benefits to the 	<ul style="list-style-type: none"> Level of risk transfer (for community and government) 	<ul style="list-style-type: none"> Existing risk transfer Opportunities for socio-economic prosperity despite risks

<p>broader surrounding community</p>	<ul style="list-style-type: none"> • Impacted stakeholders (also consider any missing stakeholders) • Community-led directions (such as is future growth/development supported) • Community capacity to adapt to natural hazards (including to thrive, prosper, remain) • Economic benefits of proposal 	<ul style="list-style-type: none"> • Capacity for community to adapt (financial, social, cultural) • Level of tolerability (include current and future) • Trade offs
<p>Appropriate scale</p> <ul style="list-style-type: none"> • at what scale in the planning system (site specific to strategic planning) should the risks be considered and managed 	<ul style="list-style-type: none"> • Strategic planning frameworks (including SEPPs, Regional Plans, LSPSs) • Local planning frameworks (LEPs, DCPs) 	<ul style="list-style-type: none"> • Planning pathways • Growth/Housing targets • Settlement patterns (urban footprint) • Residential development (infill, greenfield) • Commercial development /employment lands • Relocation/ strategic retreat
<p>Responding and decision making</p> <ul style="list-style-type: none"> • what actions are needed to manage or mitigate any unacceptable risks, this may include development conditions or changes in broader strategic planning documentation 	<ul style="list-style-type: none"> • Land suitability • Scenario/ options testing • Equity • Trade-offs • Scale, thresholds and timing for interventions • Cost effectiveness of interventions • Pathways to reduce risk transfer • Remaining gaps 	<ul style="list-style-type: none"> • Trade-offs • Urgency of intervention/s • Suitability of intervention/s • Cost feasibility of intervention options • Acceptability of any gaps