

## 28 Natural Hazards

### 28.1 Purpose

The purpose of this chapter is to provide a policy framework to address natural hazards throughout the District. The District is recognised as being subject to multiple hazards and as such, a key issue is ensuring that when development is proposed on land potentially subject to natural hazards, the risk is managed or mitigated to tolerable levels. In instances where the risk is intolerable<sup>1</sup>, natural hazards will be required to be avoided. Council has a responsibility to address the developed parts of the District that are subject to natural hazard risk through a combination of mitigation measures and education, to lessen the impacts of natural hazards.

There are no rules in this chapter. It is intended to provide policy guidance on natural hazards that is factored into the consideration of land use and subdivision applications made under the rules in other chapters.

### 28.2 Natural Hazard Identification

Natural Hazards that exist in the District include:

- Flooding and inundation
- Erosion and deposition (including landslip and rockfall)
- Land instability
- Earthquakes and liquefaction
- Avalanche
- Alluvion<sup>2</sup>, avulsion<sup>3</sup>
- Subsidence
- Tsunami / seiche<sup>4</sup>
- Fire

The District is located in an inland mountainous environment and as such can also be exposed to climatic extremes in terms of temperature, rain and heavy snowfall. This is likely to increase as a result of climate change.

Council holds information in a natural hazards database which has been accumulated over a long period of time by both the Council and the Otago Regional Council. The database is continually being updated and refined as new information is gathered. Given the ongoing updates occurring, with the exception of flooding information, which has historically been mapped, Council has decided not to map natural hazards as part of the District Plan. This decision has been made due to the fact the maps may quickly become out of date as new information becomes available. Council will rely upon the hazards database in the consideration of resource consents and building consents.

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<sup>1</sup> The concept of risk 'tolerability' is derived from the Otago Regional Council's Regional Policy Statement, which provides additional guidance as to the management of natural hazards.

<sup>2</sup> Increase in the size of a piece of land due to deposits by a river.

<sup>3</sup> Abandonment of a river channel and the formation of a new channel.

<sup>4</sup> Oscillation of water due to earthquake shaking

The database is readily available to the public through the Council website and at Council Offices.

Additional to the Resource Management Act, Council has obligations to address hazards under other legislation such as the Building Act 2004, the Civil Defence and Emergency Management Act 2002 and the Local Government Act 2002. In particular the provisions of the Building Act provide Council with the ability to refuse to issue a building consent in certain circumstances where a property is subject to natural hazards. As such, Council uses the provisions in the District Plan as just one tool to address natural hazard risk.

### 28.3 Objectives and Policies

**28.3.1 Objective - The risk to people and the built environment posed by natural hazards is managed to a level tolerable to the community.**

#### Policies

- 28.3.1.1 Ensure assets or infrastructure are constructed and located so as to avoid or mitigate:
- a. the potential for natural hazard risk to human life to be exacerbated; and
  - b. the potential risk of damage to property and infrastructural networks from natural hazards to the extent practicable, including consideration of the locational, technical and operational requirements of regionally significant infrastructure.
- 28.3.1.2 Restrict the establishment of activities which significantly increase natural hazard risk, including where they will have an intolerable impact upon the community and built environment.
- 28.3.1.3 Recognise that some areas that are already developed are now known to be subject to natural hazard risk and minimise such risk as far as practicable while acknowledging that the community may be prepared to tolerate a level of risk.
- 28.3.1.4 Enable Otago Regional Council and the Council exercising their statutory powers to undertake permanent physical works for the purposes of natural hazard mitigation while recognising the need to mitigate potential adverse effects that may result from those works.

**28.3.2 Objective - Development on land subject to natural hazards only occurs where the risks to the community and the built environment are appropriately managed.**

#### Policies

- 28.3.2.1 Avoid significantly increasing natural hazard risk.
- 28.3.2.2 Not preclude subdivision and development of land subject to natural hazards where the proposed activity does not:
- a. accelerate or worsen the natural hazard risk to an intolerable level;
  - b. expose vulnerable activities to intolerable natural hazard risk;
  - c. create an intolerable risk to human life;
  - d. increase the natural hazard risk to other properties to an intolerable level;
  - e. require additional works and costs including remedial works, that would be borne by the public.

- 28.3.2.3 Ensure all proposals to subdivide or develop land that is subject to natural hazard risk provide an assessment that meets the following information requirements, ensuring that the level of detail of the assessment is commensurate with the level of natural hazard risk:
- a. the likelihood of the natural hazard event occurring over no less than a 100 year period;
  - b. the type and scale of the natural hazard and the effects of a natural hazard on the subject land;
  - c. the effects of climate change on the frequency and scale of the natural hazard;
  - d. the vulnerability of the activity in relation to the natural hazard;
  - e. the potential for the activity to exacerbate the natural hazard risk both within and beyond the subject land;
  - f. the potential for any structures on the subject land to be relocated;
  - g. the location, design and construction of buildings and structures to mitigate the effects of natural hazards, such as the raising of floor levels;
  - h. management techniques that avoid or manage natural hazard risk to a tolerable level, including with respect to ingress and egress of both residents and emergency services during a natural hazard event.

Advice Note:

Council's natural hazards database identifies land that is affected by, or potentially affected by, natural hazards. The database contains natural hazard information that has been developed at different scales and this should be taken into account when assessing potential natural hazard risk. It is highly likely that for those hazards that have been identified at a 'district wide' level, further detailed analysis will be required.

- 28.3.2.4 Where practicable, promote the use of natural features, buffers and appropriate risk management approaches in preference to hard engineering solutions in mitigating natural hazard risk.
- 28.3.3 **Objective - The community's awareness and understanding of the natural hazard risk in the District is continually enhanced.**

**Policies**

- 28.3.3.1 Continually develop and refine a natural hazards database in conjunction with the Otago Regional Council.
- 28.3.3.2 When considering resource consent applications or plan changes, the Council will have regard to the natural hazards database.
- 28.3.3.3 Ensure the community has access to the most up-to-date natural hazard information available.
- 28.3.3.4 Increase the community awareness of the potential risk of natural hazards, and the necessary emergency responses to natural hazard events.

28.3.3.5 Monitor natural hazard trends and changes in risk and consider action should natural hazard risk become intolerable.

## 28.4 Other Relevant Provisions

### 28.4.1 District Wide Rules

Attention is drawn to the following District Wide chapters.

1 Introduction	2 Definitions	3 Strategic Direction
4 Urban Development	5 Tangata Whenua	6 Landscapes and Rural Character
25 Earthworks	26 Historic Heritage	27 Subdivision
29 Transport	30 Energy and Utilities	31 Signs
32 Protected Trees	33 Indigenous Vegetation	34 Wilding Exotic Trees
35 Temporary Activities and Relocated Buildings	36 Noise	37 Designations
Planning Maps		