

# Chapter 28

# Natural Hazards

*This table identifies provisions subject to and consequentially affected by appeals:*

Provision Subject To Appeal (identified in red text in the relevant chapter/s)	Appellant Court Number	Consequentially Affected Provisions
Natural Hazard Identification 28.2	Otago Regional Council ENV-2018-CHC-079 (further particulars received)	
Objective 28.3.1	Otago Regional Council ENV-2018-CHC-079 (further particulars received)	
Policy 28.3.1.1	Otago Regional Council ENV-2018-CHC-079 (further particulars received)	
Policy 28.3.1.2	Otago Regional Council ENV-2018-CHC-079 (further particulars received)	
Policy 28.3.1.3	Otago Regional Council ENV-2018-CHC-079 (further particulars received)	
Policy 28.3.1.4	Otago Regional Council ENV-2018-CHC-079 (further particulars received)	
Objective 28.3.2	Real Journeys Limited ENV-2018-CHC-131  Real Journeys (trading as Canyon Food & Brew Company) ENV-2018-CHC-146  Otago Regional Council ENV-2018-CHC-079 (further particulars received)	Section 28.1, Policies 28.3.2.2 and 28.3.2.3  Section 28.1, Policies 28.3.2.2 and 28.3.2.3

Policy 28.3.2.1	Otago Regional Council ENV-2018-CHC-079 (further particulars received)	
Policy 28.3.2.2	Otago Regional Council ENV-2018-CHC-079 (further particulars received)	
Policy 28.3.2.3	Real Journeys Limited ENV-2018-CHC-131  Real Journeys (trading as Canyon Food & Brew Company) ENV-2018-CHC-146	Section 28.1, Policies 28.3.2.2 and 28.3.2.3  Section 28.1, Policies 28.3.2.2 and 28.3.2.3
Policy 28.3.2.4	Otago Regional Council ENV-2018-CHC-079 (further particulars received)	
Policy 28.3.3.4	Otago Regional Council ENV-2018-CHC-079 (further particulars received)	
Policy 28.3.3.5	Otago Regional Council ENV-2018-CHC-079 (further particulars received)	

***This table identifies new provisions sought to be added:***

Appellant Court Number	Provision/s Sought to be Added into Chapter 28
Otago Regional Council ENV-2018-CHC-079 (further particulars received)	Insert new Policy 28.3.1.5: <u>When assessing tolerability, the following matters shall be taken into account:</u> <u>a. the level of risk based on:</u> <u>i. the likelihood of an event occurring;</u> <u>ii. the scale and consequence of an event occurring;</u> <u>iii. the vulnerability of the proposed activity; and</u> <u>b. the community's ability and willingness to prepare for and adapt to that risk and respond to an event.</u>
Otago Regional Council ENV-2018-CHC-079 (further particulars received)	Insert new provisions into Policy 28.3.2.3: <u>i. the long term viability and affordability of measures used to avoid, remedy or mitigate natural hazard risk;</u> <u>j. the cumulative and cascading effects of more than one natural hazard event occurring.</u>
Otago Regional Council ENV-2018-CHC-079 (further particulars received)	Insert new Policy 28.3.2.5: <u>Where natural hazard risk is uncertain or unknown, but potentially significant or irreversible, apply a precautionary approach.</u>

*Note: the annotations in this chapter reflect the Council's interpretation of the provisions affected by appeals.*

## 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.

<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.

Natural Hazard Identification 28.2 and relief sought	Appellant Court Number	Consequentially Affected Provisions
Delete Footnote 1.	Otago Regional Council ENV-2018-CHC-079 (as per further particulars received)	

## 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.

Objective 28.3.1 and relief sought	Appellant Court Number	Consequentially Affected Provisions
Amend Objective 28.3.1: Objective - The risk to people and the built environment posed by natural hazards is <del>minimised</del> <del>managed to a level tolerable to the community.</del>	Otago Regional Council ENV-2018-CHC-079 (as per further particulars received)	

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.

Policy 28.3.1.1 and relief sought	Appellant Court Number	Consequentially Affected Provisions
Amend Policy 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	Otago Regional Council ENV-2018-CHC-079 (as per further particulars received)	

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;		
c. <u>the need to establish protection structures or engineering interventions.</u>		

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.

Policy 28.3.1.2 and relief sought	Appellant Court Number	Consequentially Affected Provisions
Amend Policy 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.	Otago Regional Council ENV-2018-CHC-079 (as per further particulars received)	

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.

Policy 28.3.1.3 and relief sought	Appellant Court Number	Consequentially Affected Provisions
Amend Policy 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 <del>acknowledging that the community may be prepared to tolerate a level of risk considering the community's ability and willingness to prepare for and adapt to that risk and respond to an event.</del>	Otago Regional Council ENV-2018-CHC-079 (as per further particulars received)	

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.

Policy 28.3.1.4 and relief sought	Appellant Court Number	Consequentially Affected Provisions
Amend Policy 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 risk mitigation while recognising the need to mitigate potential adverse effects that may result from those works.	Otago Regional Council ENV-2018-CHC-079 (as per further particulars received)	

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.**

Objective 28.3.2 and relief sought	Appellant Court Number	Consequentially Affected Provisions
Amend Objective 28.3.2: Objective - Development on land subject to <u>significant risks from</u> natural hazards only occurs where the risks to the community and the built environment are appropriately managed.	Real Journeys Limited ENV-2018-CHC-131	Section 28.1, Policies 28.3.2.2 and 28.3.2.3
	Real Journeys (trading as Canyon Food & Brew Company) ENV-2018-CHC-146	Section 28.1, Policies 28.3.2.2 and 28.3.2.3
Amend Objective 28.3.2: Objective - Development on land subject to natural hazards only occurs where the risks to the community and the built environment are <u>avoided, appropriately managed or mitigated.</u>	Otago Regional Council ENV-2018-CHC-079 (as per further particulars received)	

Policies

**28.3.2.1 Avoid significantly increasing natural hazard risk.**

Policy 28.3.2.1 and relief sought	Appellant Court Number	Consequentially Affected Provisions
Amend Policy 28.3.2.1: Avoid significantly increasing natural hazard risk <u>and, where the risk is not significantly increased minimise any other natural hazard risk, including displacement of risk off-site.</u>	Otago Regional Council ENV-2018-CHC-079 (as per further particulars received)	

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.**

Policy 28.3.2.2 and relief sought	Appellant Court Number	Consequentially Affected Provisions
Amend Policy 28.3.2.2: <u>When minimising natural hazard risk, ensure that Not preclude</u> subdivision and development of land subject to natural hazards where the proposed activity <u>risk</u> does not:	Otago Regional Council ENV-2018-CHC-079 (as per further particulars received)	

<p>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 <u>and maintenance</u> works, that would be borne by the public.</p>		
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- 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.

Policy 28.3.2.3 and relief sought	Appellant Court Number	Consequentially Affected Provisions
<p>Amend Policy 28.3.2.3:  Ensure all proposals to subdivide or develop land that is subject to <u>significant natural hazard risk identified on District Plan Maps</u> <del>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 is assessed in terms of:</del>  a. ...   <del>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.</del></p>	<p>Real Journeys Limited  ENV-2018-CHC-131   Real Journeys (trading as Canyon Food &amp; Brew Company)  ENV-2018-CHC-146</p>	<p>Section 28.1, Policies 28.3.2.2 and 28.3.2.3   Section 28.1, Policies 28.3.2.2 and 28.3.2.3</p>

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.**

Policy 28.3.2.4 and relief sought	Appellant Court Number	Consequentially Affected Provisions
Amend Policy 28.3.2.4: <del>Where practicable, p</del> Promote the use of natural features, buffers and appropriate risk management approaches in preference to hard engineering solutions in mitigating natural hazard risk.	Otago Regional Council ENV-2018-CHC-079 (as per further particulars received)	

### 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.**

Policy 28.3.3.4 and relief sought	Appellant Court Number	Consequentially Affected Provisions
Amend Policy 28.3.3.4: Increase the community awareness of the potential risk of natural hazards, and the necessary emergency responses to natural hazard events <u>as part of developing an understanding of tolerance to risk.</u>	Otago Regional Council ENV-2018-CHC-079 (as per further particulars received)	

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

Policy 28.3.3.5 and relief sought	Appellant Court Number	Consequentially Affected Provisions



Amend Policy 28.3.3.5: Monitor natural hazard trends and changes in risk and <del>consider- action</del> <u>undertake an adaptive management approach before</u> <del>should</del> natural hazard risk becomes intolerable.	Otago Regional Council ENV-2018-CHC-079 (as per further particulars received)
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## 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		