



# Section 32 Evaluation Report

## Natural Hazards

### Contents

Section 32 Evaluation Report: Natural Hazards.....	2
1. Strategic Context .....	2
2. Regional Planning Documents .....	2
3. Resource Management Issues .....	6
4. Purpose and Options .....	7
5. Scale and Significance Evaluation .....	12
6. Evaluation of proposed Objectives S32 (1) (a).....	13
7. Evaluation of the proposed provisions S32 (1) (b) .....	14
8. Efficiency and effectiveness of the provisions.....	17
9. The risk of not acting. ....	17
References .....	17

# Section 32 Evaluation Report: Natural Hazards

## 1. Strategic Context

Section 32(1)(a) of the Resource Management Act 1991 requires that a Section 32 evaluation report must examine the extent to which the proposed objectives are the most appropriate way to achieve the purpose of the Act.

The purpose of the Act demands an integrated planning approach and direction:

### *5 Purpose*

*(1) The purpose of this Act is to promote the sustainable management of natural and physical resources.*

*(2) In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—*

*(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*

*(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*

*(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

Addressing natural hazards within the District Plan is required to enable people and communities to provide for their well-being and health and safety, and also to ensure effects arising from natural hazards are addressed in terms of section 5(2)(c).

## 2. Regional Planning Documents

The District Plan must *give effect* to the Operative Regional Policy Statement and must *have regard* to a Proposed Regional Policy Statement. The Operative Regional Policy Statement 1998 contains a number of references to natural hazards in its Objectives and Policies:

### **Objectives**

*11.4.1 To recognise and understand the significant natural hazards that threaten Otago's communities and features.*

*11.4.2 To avoid or mitigate the adverse effects of natural hazards within Otago to acceptable levels.*

*11.4.3 To effectively and efficiently respond to natural hazards occurring in Otago.*

*11.4.4 To avoid, remedy or mitigate the adverse effects of hazard mitigation measures on natural and physical resources.*

### **Policies**

*11.5.1 To recognise and provide for Kai Tahu values in natural hazard planning and mitigation.*

*11.5.2 To take action necessary to avoid or mitigate the unacceptable adverse effect of natural hazards and the responses to natural hazards on:*

*(a) Human life; and*

*(b) Infrastructure and property; and*

*(c) Otago's natural environment; and*

*(d) Otago's heritage sites.*

*11.5.3 To restrict development on sites or areas recognised as being prone to significant hazards, unless adequate mitigation can be provided.*

*11.5.4 To avoid or mitigate the adverse effects of natural hazards within Otago through:*

- (a) Analysing Otago's natural hazards and identifying their location and potential risk; and*
- (b) Promoting and encouraging means to avoid or mitigate natural hazards; and*
- (c) Identifying and providing structures or services to avoid or mitigate the natural hazard; and*
- (d) Promoting and encouraging the use of natural processes where practicable to avoid or mitigate the natural hazard.*

**11.5.5** *To provide a response, recovery and restoration capability to natural hazard events through:*

- (a) Providing civil defence capabilities; and*
- (b) Establishing procedures and responsibilities to ensure quick responses to any natural hazard event; and*
- (c) Identifying agency responsibilities for assisting recovery during and after events; and*
- (d) Developing recovery measures incorporated into civil defence plans.*

**11.5.6** *To establish the level of natural hazard risk that threatened communities are willing to accept, through a consultative process.*

**11.5.7** *To encourage and where practicable support community-based responses to natural hazard situations.*

The proposed changes to the District Plan give effect to these parts of the operative RPS, by synthesising the objectives and policies through the provisions.

It must be noted that the Otago Regional Council ["ORC"] is currently in the process of reviewing the RPS 1998. In May 2014 the ORC published and consulted on the RPS 'Otago's future: Issues and Options Document, 2014' ([www.orc.govt.nz](http://www.orc.govt.nz)). The Proposed RPS was released for formal public notification on the 23 May 2015.

Some of the relevant provisions of the Proposed RPS are as follows:

**Objective 3.2: Risk that natural hazards pose to Otago's communities are minimised**

**Policy 3.2.1: Identifying natural hazards**

*Identify natural hazards that may adversely affect Otago's communities, including hazards of low likelihood and high consequence.*

**Policy 3.2.2: Assessing natural hazard likelihood**

*Assess the likelihood of natural hazard events occurring, having regard to a timeframe of no less than 100 years, including by considering:*

- (a) Hazard type and characteristics;*
- (b) Multiple and cascading hazards;*
- (c) Cumulative effects, including from multiple hazards with different risks;*
- (d) Effects of climate change;*
- (e) Using the best available information for calculating likelihood;*
- (f) Exacerbating factors.*

**Policy 3.2.3: Assessing natural hazard consequence**

*Assess the consequences of natural hazard events, including by considering:*

- (a) The nature of activities in the area;*
- (b) Individual and community vulnerability;*
- (c) Impact on individual and community health and safety;*

- (d) *Impact on social, cultural and economic wellbeing;*
- (e) *Impact on infrastructure and property, including access and services;*
- (f) *Risk reduction and hazard mitigation measures;*
- (g) *Lifeline utilities, essential and emergency services, and their co-dependence;*
- (h) *Implications for civil defence agencies and emergency services;*
- (i) *Cumulative effects;*
- (j) *Factors that may exacerbate a hazard event.*

**Policy 3.2.4: Managing natural hazard risk**

*Manage natural hazard risk, including with regard to:*

- (a) *The risk they pose, considering the likelihood and consequences of natural hazard events; and*
- (b) *The implications of residual risk, including the risk remaining after implementing or undertaking risk reduction and hazard mitigation measures; and*
- (c) *The community's tolerance of that risk, now and in the future, including the community's ability and willingness to prepare for and adapt to that risk, and respond to an event; and*
- (d) *The changing nature of tolerability and risk; and*
- (e) *Sensitivity of activities to risk.*

**Policy 3.2.5: Assessing activities for natural hazard risk**

*Assess activities for natural hazard risk, by considering:*

- (a) *The natural hazard risk identified, including residual risk; and*
- (b) *Any measures to avoid, remedy or mitigate those risks, including relocation and recovery methods; and*
- (c) *The long term viability and affordability of those measures; and*
- (d) *Flow-on effects of the risk to other activities, individuals and communities; and*
- (e) *The availability of, and ability to provide, lifeline utilities, and essential and emergency services, during and after a natural hazard event.*

**Policy 3.2.6: Avoiding increased natural hazard risk**

*Avoid increasing natural hazard risk, including by:*

- (a) *Avoiding activities that significantly increase risk, including displacement of risk off-site; and*
- (b) *Encouraging design that facilitates:*
  - (i) *Recovery from natural hazard events; or*
  - (ii) *Relocation to areas of lower risk.*

**Policy 3.2.7: Reducing existing natural hazard risk**

*Reduce existing natural hazard risk, including by:*

- (a) *Encouraging activities that:*
  - (i) *Reduce risk; or*
  - (ii) *Reduce community vulnerability; and*

- (b) Discouraging activities that:
  - (i) Increase risk; or
  - (ii) Increase community vulnerability; and
- (c) Considering the use of exit strategies for areas of significant risk; and
- (d) Encouraging design that facilitates:
  - (i) Recovery from natural hazard events or
  - (ii) Relocation to areas of lower risk; and
- (e) Relocating lifeline utilities, and facilities for essential and emergency service, to areas of reduced risk, where appropriate and practicable; and
- (f) Enabling development, upgrade, maintenance and operation of lifeline utilities and facilities for essential and emergency services; and
- (g) Re-assessing natural hazard risk, and community tolerance of that risk, following significant natural hazard events.

**Policy 3.2.8: Applying a precautionary approach**

Where natural hazard risk is uncertain or unknown, but potentially significant or irreversible, apply a precautionary approach to identifying, assessing and managing that risk.

**Policy 3.2.9: Protecting features and systems that provide hazard mitigation**

Protect, restore, enhance and promote the use of natural or modified features and systems, which contribute to mitigating the effects of both natural hazards and climate change.

**Policy 3.2.10: Mitigating natural hazards**

Give preference to risk management approaches that reduce the need for hard mitigation measures or similar engineering interventions, and provide for hard mitigation measures only when:

- (a) Those measures are essential to reduce risk to a level the community is able to tolerate; and
- (b) There are no reasonable alternatives; and
- (c) It would not result in an increase in risk, including displacement of risk off-site; and
- (d) The adverse effects can be adequately managed; and
- (e) The mitigation is viable in the reasonably foreseeable long term.

**Policy 3.2.11: Locating hard mitigation measures**

Enable the location of hard mitigation measures or similar engineering interventions on public land only when:

- (a) There is significant public or environmental benefit in doing so; or
- (b) The work relates to the functioning ability of a lifeline utility, or facility for essential or emergency services.

**Objective 3.4: Good quality infrastructure and services meet community needs**

**Policy 3.4.3: Designing lifeline utilities and facilities for essential or emergency services**

Design lifeline utilities, and facilities for essential or emergency services, to:

- (a) Maintain their ability to function to the fullest extent possible, during and after natural hazard events; and

- (b) *Take into account their operational co-dependence with other lifeline utilities and essential services to ensure their effective operation.*

**Policy 3.4.4: Managing hazard mitigation measures, lifeline utilities, and essential and emergency services**

*Protect the functioning of hazard mitigation measures, lifeline utilities, and essential or emergency services, including by:*

- (a) *Restricting the establishment of those activities that may result in reverse sensitivity effects; and*
- (b) *Avoiding significant adverse effects on those measures, utilities or services; and*
- (c) *Avoiding, remedying or mitigating other adverse effects on those measures, utilities or services; and*
- (d) *Assessing the significance of adverse effects on those measures, utilities or services, as detailed in Schedule 3; and*
- (e) *Maintaining access to those measures, utilities or services for maintenance and operational purposes; and*
- (f) *Managing other activities in a way that does not foreclose the ability of those mitigation measures, utilities or services to continue functioning.*

**Objective 3.7: Urban areas are well designed, sustainable and reflect local character**

**Policy 3.7.1: Using the principles of good urban design**

*Encourage the use of good urban design principles in subdivision and development in urban areas, as detailed in Schedule 6, to: [...]*

- (c) *Reduce risk from natural hazards, including by avoiding areas of significant risk; [...]*

**Objective 3.8: Urban growth is well designed and integrates effectively with adjoining urban and rural environments**

**Policy 3.8.1: Managing for urban growth**

*Manage urban growth and creation of new urban land in a strategic and co-ordinated way, by: [...]*

- (c) *Identifying future growth areas that: [...]*

- (iv) *Avoid land with significant risk from natural hazards; [...]*

Generally speaking, the proposed RPS advocates for a more cautious approach with regard to natural hazards than the Proposed District Plan, seeking to avoid development where a significant hazard exists. Therefore there is not strict alignment between the Proposed RPS and the Proposed District Plan on this matter. QLDC will be making a submission to the ORC on this matter, considering that the proposed ORC approach is overly risk averse and does not adequately account for the District's limited urban land resource and strong population growth (whilst noting that QLDC supports the notion, as expressed by the ORC, that development should not proceed where intolerable risk is present that cannot be adequately mitigated). An important matter relates to how "significant risk" is defined – there may be situations where significant risk is presented, and mitigation can be achieved to adequately address the risk (presuming 'significant' does not necessarily imply 'extreme' or 'intolerable' risk).

Notwithstanding the above, the proposed provisions have regard to the proposed RPS.

### 3. Resource Management Issues

The resource management issues set out in this section have been identified from the following sources:

- Review of District Plan Natural Hazard Issues, Opus International Consultants (2012) – see Section 10 of this report for the weblinks to the Opus Report and attachments.
- Monitoring and review of Operative District Plan

- Consultation with the Otago Regional Council
- Legislative changes

The Issues are:

- Existing settlements within the District are subject to natural hazards. There is a need to recognise the existence of these hazards when undertaking development within existing settlements.
- In some instances the natural hazard risk is significant and development should be discouraged.
- Council’s knowledge of natural hazards in the District is continually growing as further study is undertaken, including that in conjunction with the Otago Regional Council. Therefore it is important that the approach to addressing natural hazards in the District Plan can easily accommodate new information as it comes to light.
- Mapping natural hazards is an integral part of how Council manages, communicates and minimises the risk of natural hazards. The only natural hazard that is mapped in the operative and proposed Plans is flooding. All other hazards are mapped within Council’s hazard database.
- Lack of acknowledgement that Council is responsible for addressing natural hazards under a number of different pieces of legislation such as the Resource Management Act, the Local Government Act, the Building Act and the Civil Defence and Emergency Management Act. As a consequence, the District Plan is
- Private property rights are a relevant consideration in the wider approach to natural hazards. Providing provisions that are overly restrictive is counter-productive to sustainable management and the continued growth of the District.
- The operative Plan does not address natural hazards in a comprehensive manner. Some zones have natural hazards as an assessment matter, and others do not, despite being potentially subject to natural hazards. Additionally there are assessment criteria that are often worded differently across zones meaning there is a potential for an inconsistent approach to the assessment of natural hazards through the resource consent process.

#### 4. Purpose and Options

The purpose of this chapter is to promote the sustainable management of the District with respect to natural hazards. Council has a responsibility under Section 31(1)(b) of the Act to address natural hazards:

***“31 Functions of territorial authorities under this Act***

*(1) Every territorial authority shall have the following functions for the purpose of giving effect to this Act in its district:*

- b) the control of any actual or potential effects of the use, development, or protection of land, including for the purpose of—*
  - (i) the avoidance or mitigation of natural hazards”*

Furthermore, this reflects the intent of the proposed Strategic Directions Chapter as follows:

*Objective 3.2.2.2 To manage development in areas affected by natural hazards.*

*Policy 3.2.2.2.1 Ensure a balanced approach between enabling higher density development within the District’s scarce urban land resource and addressing the risks posed by natural hazards to life and property.*

Determining the most appropriate methods to resolve the natural hazard issues identified will enable the Plan to give effect to relevant parts of the Strategic Directions Chapter through the management of development in areas affected by natural hazards, and ultimately meet the purpose of the Act.

## **Broad options considered to address issues**

Four broad options were considered to address the issues:

**Option 1: Status quo / no change:** Retain the current chapter and varying assessment criteria throughout the Plan.

**Option 2 (Recommended) : Retain and improve:** Retain the existing approach to managing natural hazards – that is no rules (excluding flooding) using natural hazards as a trigger for needing resource consent. Instead focus on ensuring there is a consistent approach to how hazards are dealt with in the Plan and a consistent framework for the assessment of resource consents that includes natural hazard risk consideration as a matter for control / discretion.

**Option 3: Hazards database referred to in Plan but remains external to Plan:** This is the approach that is being used elsewhere including in the Proposed Auckland Unitary Plan. The approach requires a 'catch all' rule that requires consent if a site is shown as being subject to natural hazards in Council's natural hazards database. The database remains external to the Plan.

**Option 4: Retain and improve plus map all hazards in Plan.** This approach builds on Option 2 but also requires all hazards to be mapped in the Plan and use the presence of the mapped hazards as a trigger for consent.



The costs and benefits of these options are evaluated in the table below:

	<b>Option 1: Status quo/ No change</b>	<b>Option 2: Retain and Improve</b>	<b>Option 3: Hazards Database External to Plan but referred to in Plan.</b>	<b>Option 4: Retain and Improve Plus map all hazards in Plan</b>
<b>Costs</b>	Does not address all the identified issues nor address the lack of consistency in terms of assessment criteria across various zones.	<p>Requires additional hazard information gathering.</p> <p>Requires focus on zoning to ensure activities potentially susceptible to natural hazards e.g. subdivisions or new dwellings are subject to resource consent to enable consideration of natural hazards.</p> <p>Requires use of s71 of the Building Act 2004 for natural hazards to be considered for proposals that do not have a resource consent trigger. Therefore the responsibility for addressing hazards would be shared by the Building Consent process, as well as the Resource Consent process. This may result in uncertainty (perceived or otherwise) as to how s71 of the Building Act is applied.</p>	<p>Requires additional hazard information gathering.</p> <p>Potentially ultra vires as Plan relies upon external information to trigger need for resource consent which has not been subject to first schedule process.</p>	<p>Requires additional hazard information gathering.</p> <p>Council does not currently have all natural hazards mapped for the entire District and to the same level of detail. Significant cost would be required to get natural hazards mapped.</p> <p>Potential increased Plan publication costs with a separate series of hazard maps likely to be required.</p> <p>As new hazard information comes to hand plan changes would be required.</p>

<p><b>Benefits</b></p>	<p>Retains the established approach which parties are familiar with.</p>	<p>Retains established approach but improves where necessary for clarity and to assist implementation.</p> <p>Keeping natural hazard information outside of the Plan ensures that the best available information is used when assessing and managing the risk from natural hazards.</p> <p>Currently the hazards information held within the Natural Hazards database is at varying scales. Considerable further work would be required to update that information (i.e. so it has a high level of certainty) such that it could be mapped in the District Plan. This adds further weight to the argument that the information in the Hazards database should remain external to the Plan.</p> <p>Avoids a requirement for the Plan Change process to update natural hazards information, as the information sits outside the Plan. The process for updating the hazards information is therefore more nimble.</p> <p>It must be noted that this approach is a departure from the approach outlined in the Opus Report commissioned in 2012, which recommended the mapping of hazards within the Plan. For the reasons outlined above it is recommended that the mapped information remains external to the</p>	<p>Ensures the most up to date information is used to trigger the need for resource consent.</p> <p>Keeping natural hazard information outside of the Plan ensures that the best available information is used when assessing and managing the risk from natural hazards.</p>	<p>This approach would allow a suite of rules to be linked to hazard maps, providing a high degree of certainty.</p>
------------------------	--	---	---	--

		<p>Plan. The Opus Report was also commissioned during the 'rolling review' of Plan provisions. However, since 2012, the approach to reviewing the District Plan has shifted to being a 'full review' (albeit it notified in 2 stages). The 'full review' process has created opportunities to consider methods for addressing hazards that were not considered in 2012.</p> <p>Provides the opportunity to acknowledge the fact that in this District there are areas of existing development that were established prior to our current understanding of natural hazards, and have subsequently been identified as being within hazard-prone areas. For new development in these areas, this approach enables consideration to be given to options for risk mitigation, rather than a policy of avoidance, which could otherwise be used for greenfield developments (and through application of s106RMA).</p>		
<b>Ranking</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>2</b>

## **5. Scale and Significance Evaluation**

The level of detailed analysis undertaken for the evaluation of the proposed objectives and provisions has been determined by an assessment of the scale and significance of the implementation of the proposed provisions in the Natural Hazards Chapter. In making this assessment, regard has been had to the following, namely whether the objectives and provisions:

- Result in a significant variance from the existing baseline.
- Have effects on matters of national importance.
- Adversely affect those with specific interests, e.g, Tangata Whenua.
- Involve effects that have been considered implicitly or explicitly by higher order documents.
- Impose increased costs or restrictions on individuals, communities or businesses.

In this case both the scale and significance are high given the level of occurrence of natural hazards within the District, and the potential effects associated with them.

## 6. Evaluation of proposed Objectives S32 (1) (a)

The purpose of the Act is to promote the sustainable management of natural and physical resources. Council is required to undertake an evaluation of the proposed objectives of the proposal.

<i>Objective</i>	<i>Appropriateness</i>
Objective 28.3.1 – The effects of natural hazards on the community and the built environment are minimised to tolerable levels.	<p>Existing built areas of the District are subject to natural hazards. As such it is appropriate to ensure the effects of natural hazards on these communities are minimised to tolerable levels. This approach recognises that avoidance is not always possible and in the context of the Queenstown Lakes District minimising effects to tolerable levels is a more appropriate approach.</p> <p>The concept of tolerability is introduced through the proposed RPS.</p>
Objective 28.3.2 –Development on land subject to natural hazards only occurs where the risks to the community and the built environment are avoided or appropriately managed or mitigated.	<p>Whilst recognising existing built areas of the District are subject to natural hazards, that does not mean that further development in those areas is ‘a given’. In considering development proposals on land subject to natural hazards it is appropriate to allow development where the risks can be avoided or appropriately mitigated. This recognises that in some locations in the District ‘avoidance’ is not an option, and that mitigation can be an appropriate approach to address the natural hazard risk. It also recognises the importance of existing settlements to the District and the need to consolidate development in these areas rather than allow ongoing expansion.</p> <p>Section 5 of the Act requires District Plans to balance competing environmental, economic and social matters. This objective seeks to give effect to the Act by addressing natural hazard risk in a balanced manner, and acknowledging that in this District it will not always be practicable to avoid risk.</p> <p>This objective also sets the framework for a risk-based approach, whereby the level of risk informs the extent to which the hazard needs to be addressed and the resultant planning response.</p>
Objective 28.3.3 –The community’s awareness and understanding of the natural hazard risk in the District is continually enhanced.	<p>This objective recognises the fact that the District has a high exposure to natural hazards and in some locations existing developed areas are subject to natural hazard risks. In some instances the risk is mitigated to a degree, however ensuring the community is aware of these risks is an appropriate way to further mitigate the risk and to enable the community to be ‘in readiness’ for a natural hazard event. This also links with Council’s obligations under other Acts such as the Civil Defence and Emergency Management Act.</p>

The above objectives are considered to be the most appropriate methods of achieving the purpose of the Act, as they identify and give direction as to how natural hazard issues are to be addressed.

## 7. Evaluation of the proposed provisions S32 (1) (b)

(See also Table of options in Section 5 above.)

Objective 28.3.1 –The effects of natural hazards on the community and the built environment are minimised to tolerable levels.

Objective 28.3.2 –Development on land subject to natural hazards only occurs where the risks to the community and the built environment are avoided or appropriately managed or mitigated.

Objective 28.3.3 –The community's awareness and understanding of the natural hazard risk in the District is continually enhanced.

<b>Proposed Provisions</b>	<b>Costs</b>	<b>Benefits</b>	<b>Effectiveness and Efficiency</b>
<p>Policies:</p> <p>28.3.1.1 to 28.3.1.5</p>	<p><b>Environmental</b> Physical works undertaken to mitigate or minimise natural hazard risk can in themselves have adverse environmental effects (e.g visual).</p> <p><b>Economic</b> There may be costs associated with undertaking developments in a manner that minimises natural hazards that are additional to typical development costs such as importation of fill material to increase floor levels.</p> <p>There may be instances where the risk is 'intolerable' and cannot be appropriately mitigated.</p> <p><b>Social and Cultural</b> There is the potential for activities necessary for the protection of existing settlements from natural hazards to have impacts on cultural values through land disturbance or the disturbance of items of cultural or historic value.</p>	<p><b>Environmental</b> Development will not occur in locations where the natural hazard risk is intolerable.</p> <p>Enables appropriate responses for existing settlements that are exposed to known hazards, balancing the need to address risk whilst acknowledging that there may be an acceptance of a level of risk in some cases. Over time, as existing settlements continue to be developed and/or redeveloped their resilience to the risks associated with hazards will increase.</p> <p><b>Economic</b> Providing a policy framework that allows for natural hazard mitigation provides for greater certainty for Plan users.</p> <p>Reducing the risk natural hazards pose to the existing built environment.</p> <p>Avoids unnecessary costs created by activities that increase the effects natural hazards may or can have on the community.</p> <p><b>Social and Cultural</b> Avoidance or mitigation of the social costs of natural hazard events on communities.</p>	<p>Council has a role to play in ensuring the risks of natural hazards on the community and the built environment are of a nature that is 'tolerable'. This includes restricting the establishment of activities that have the potential to increase the effects natural hazards can have on the community and built environment of the Queenstown Lakes District. It would be neither effective nor efficient to not acknowledge the natural hazard risk that the District is subject to.</p>

<b>Proposed Provisions</b>	<b>Costs</b>	<b>Benefits</b>	<b>Effectiveness and Efficiency</b>
<p>Policies 28.3.2.1 to 28.3.2.5</p>	<p><b>Environmental</b> New approaches to building (such as raising floor levels) to address natural hazard risks could have consequences in terms of changes of built form or heights of structures in existing developed areas.</p> <p><b>Economic</b> Land that is discovered to be unsuitable for development due to natural hazard risk will have potentially a decreased market value.</p> <p>Undertaking development in a manner that mitigates natural hazard risk may reduce the total development 'yield' of a property.</p> <p><b>Social and Cultural</b> It may be that parts of existing settlements are unsuitable for further development, or in a worse case scenario need to be abandoned.</p>	<p><b>Environmental</b> Development can occur on existing zoned land, subject to appropriately addressing natural hazards issues, providing for compact urban form.</p> <p>Promoting the use of natural features in addressing natural hazard risk provides for a less modified landscape.</p> <p>Using sites in a manner that recognises their limitations in natural hazards terms (micro-siting) can ensure land is used in an appropriate manner.</p> <p><b>Economic</b> Using natural features and buffers to address natural hazard risk requires less investment than hard structures.</p> <p>Acknowledges that there will be instances where infrastructure will need to be located on land subject to natural hazard risk.</p> <p><b>Social and Cultural</b> Addressing natural hazards ensures the existing cultural and social fabric of the District is appropriately protected. This includes the protection of sites with heritage or cultural value, where achievable.</p>	<p>Given that parts of the District are subject to natural hazards but also subject to high growth there is the need to adequately balance the need for development against natural hazard risk. It is recognised that there are areas of the District that are subject to natural hazards to the extent that the sites are unsuitable for development. It is also recognised that on other sites subject to natural hazard risk there are mechanisms available to provide mitigation of that risk and Council seeks to encourage mitigation. It is considered this approach provides an appropriate balance between the efficient use of land and effective management of natural hazard risk through avoidance or mitigation, and thereby gives effect to s31(b)(i)RMA – Functions of Territorial Authorities.</p>
<p>Policies 28.3.3.1 to 28.3.3.4</p>	<p><b>Environmental</b> None</p> <p><b>Economic</b> The collection of information regarding natural hazards has costs. Council will seek to share these with the Otago Regional Council.</p> <p>Those undertaking developments will</p>	<p><b>Environmental</b> Compiling and maintaining a natural hazard database helps ensure Council has the most up-to-date natural hazard information available to assist with making sound resource management decisions. As the database sits outside the District Plan it is able to be updated as new information comes to hand.</p> <p>The database will contain information at differing</p>	<p>Council has a responsibility not only to address hazards in the District Plan, but also to gather the information necessary to effectively manage natural hazards and share this information with the public. This is required to ensure the residents of the District can effectively plan for natural hazard events through being aware of the potential risks posed by hazards. It also enables those contemplating development</p>

<b>Proposed Provisions</b>	<b>Costs</b>	<b>Benefits</b>	<b>Effectiveness and Efficiency</b>
	<p>have to undertake investigations into the natural hazard context of their site.</p> <p>Monitoring natural hazards requires ongoing investment by Council.</p> <p>There are costs associated with publishing and disseminating material on natural hazards and making natural hazard information available on Council's website.</p> <p>Funding may not be available for the collection of information.</p> <p><b>Social and Cultural</b> People may have to adopt new or enhanced behaviours to ensure they are adequately prepared for a natural hazard event.</p> <p>Making people aware of natural hazard risks without appropriately communicating the level of risk could create an unnecessary climate of 'fear'.</p>	<p>scales, so should be used primarily as a basis for more in depth, site specific analysis. Such an analysis would consider the specific nature and scale of any proposal when determining the resultant level of risk. This approach therefore enables any proposal to be considered on its own specific merits through the resource consent process.</p> <p><b>Economic</b> Monitoring natural hazard trends enables Council to be proactive in managing natural hazard risk and potentially reducing the costs of an event through preparation.</p> <p>Making natural hazards information available to the public enables those contemplating development to be aware of the potential costs of development in terms of natural hazards mitigation which can be factored in to project budgeting.</p> <p><b>Social and Cultural</b> Enhancing the community's awareness of natural hazards can help ensure the community is prepared for a natural hazard event.</p> <p>A natural hazards database can assist Council in planning for natural hazard events.</p>	<p>to be aware of the potential natural hazards that will need to be addressed through the development process, in both Resource Consent and Building Consent processes.</p>



## **8. Efficiency and effectiveness of the provisions.**

The above provisions are drafted to specifically address the resource management issues identified with the current provisions, and to enhance those provisions that already function well. A number of areas of the existing chapter have been revised to aid the readability of the Plan by keeping the provisions concise and targeted. Further to this, natural hazards assessment criteria in various chapters will be removed, and a consistent matter of discretion relating to natural hazards will be introduced that references the natural hazards objectives and policies.

Through the inclusion of additional objectives and policies the natural hazard provisions of the Plan are strengthened and enable a more consistent consideration of natural hazards within the Plan than the current Plan provisions allow. The revised provisions also provide guidance to those preparing or considering resource consent applications.

## **9. The risk of not acting.**

The changes proposed here-in broadly seek a continuation of the current approach to natural hazards. However, the proposed changes would introduce stronger, more targeted policies and a more co-ordinated approach as to how the Plan, combined with other methods available to the Council, addresses natural hazard risk.

Some of the risks associated with not reviewing the operative natural hazards provisions are that:

- The current provisions do not give clear guidance as to the information requirements for development requiring resource consent due to the presence of natural hazards;
- The operative policy framework is not sufficiently targeted;
- References to natural hazards occur throughout the operative Plan in an ad hoc manner;
- There is little acknowledgement of the fact that the District has areas of existing development within hazard-prone areas, and the opportunity for mitigation must be able to be considered as an option.

It is considered that there is sufficient information available on which to base the above evaluation.

Council will continue to gather natural hazards information in conjunction with the Otago Regional Council and as such will continue to add to the depth and breadth of information in the hazards database. This information can be used in decision making processes and will also inform future Plan reviews.

## **References**

Queenstown Lakes District Council - Review of District Plan Natural Hazard Issues, Opus International Consultants Ltd (2012) - [link](#)