

Queenstown Lakes District Proposed District Plan – Stage 1

Section 42A Hearing Report For Hearing commencing: 13 March 2017

Report dated: 15 February 2017

Report on submissions and further submissions

Chapter 28 Natural Hazards

File Reference: Chp. 28 S42A

Contents:

1. Executive summary
2. Introduction
3. Code of conduct
4. Scope
5. Background – Statutory and Non-Statutory Documents
6. Background – Overview of the issues
7. Submissions
8. Analysis
9. Group 1: Relief sought by the Otago Regional Council
10. Group 2: Relief sought regarding specific natural hazards
11. Group 3: *Pro forma* submission points
12. Group 4: Submission points seeking specific changes to the wording of provisions
13. Conclusion

Appendix 1. Recommended revised chapter

Appendix 2. List of Submission points with recommended decision

Appendix 3. Section 32 Report

Appendix 3a Attachment to Section 32 Report: Opus International Consultants Ltd: Review of District Plan Natural Hazard Issues (2012)

Appendix 4. S32AA evaluation of the recommended changes

1. EXECUTIVE SUMMARY

- 1.1. It is recommended that the framework and structure of the Proposed District Plan (**PDP**) Natural Hazards Chapter 28 (**Chapter 28**) should be retained as notified, and outlined and supported in the section 32 (**s32**) assessment (see **Appendix 3**).
- 1.2. Several changes to the objectives and policies are considered appropriate, and these are shown in the Revised Chapter attached as **Appendix 1 (Revised Chapter)** to this evidence. A number of substantive changes are proposed as well as minor changes, or wording changes that provide better expression. I have evaluated the appropriateness, benefits and costs of the substantive changes in terms of the requirements of section 32AA of the Resource Management Act (**RMA**) (see **Appendix 4**).
- 1.3. I consider that the recommended changes to Chapter 28 will better meet the purpose of the RMA and are the most appropriate way to achieve the relevant objectives. They are considered more effective and efficient than the equivalent provisions within the notified chapter and the Operative District Plan (**ODP**). I also consider that the amendments are more effective and efficient than the changes sought by submitters that I recommend be rejected.

2. INTRODUCTION

- 2.1. My name is Amy Bowbyes, I am employed by the Queenstown Lakes District Council (**Council**) as a Senior Policy Planner. I hold the qualifications of Bachelor of Science and Bachelor of Arts from Victoria University. I have primarily worked for local authorities in policy and district plan administration roles since 2005.
- 2.2. I note that I am not the author of the notified Chapter 28 or the accompanying s32 report.
- 2.3. My current role is Senior Policy Planner, which I have held since February 2015, prior to this I was employed at Council as Senior Policy Planner (fixed term, part-time 20 hours per week) from August 2014.

3. CODE OF CONDUCT

- 3.1. Although this is a Council hearing, I confirm that I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note and that I agree to comply with it. I confirm that I have considered all the material facts that I am aware of that might alter or detract from the opinions that I express, and that this evidence is within my area of expertise, except where I state that I am relying on the evidence of another person.

3.2. I am authorised to give this evidence on Council's behalf.

4. SCOPE

4.1. My evidence addresses the submissions and further submissions received on the notified Chapter 28.

4.2. Although this evidence is intended to be a standalone document and also meet the requirements of section 42 of the RMA (**s42A**), the s32 Evaluation Report (**s32**) is attached as **Appendix 3** for information and reference purposes. The report prepared by Opus International Consultants Ltd (2012) that is referenced in the s32 is attached as **Appendix 3a**.

4.3. Where I recommend substantive changes to provisions, an explanation and reasons for the changes are set out within the body of this report and I have also assessed those changes in terms of s32AA (see **Appendix 4**). The table in **Appendix 2** outlines whether individual submissions are accepted, accepted in part, or rejected, and whether identified further submissions are considered to not be relevant to the primary submission point they accompany.

5. BACKGROUND – STATUTORY AND NON-STATUTORY DOCUMENTS

5.1. The s32 provides an overview of the higher order planning documents that were considered in the preparation of Chapter 28 (see **Appendix 3**). In addition, a more detailed summary of relevant legislation and documents is provided below.

The Resource Management Act (RMA)

5.2. The RMA and in particular the purpose and principles in Part 2, which emphasise the requirement to sustainably manage the use, development and protection of the natural and physical resources for current and future generations, taking into account the 'four well beings' (social, economic, cultural and environmental) is relevant to issues arising with Chapter 28. While natural hazards do not relate to any matters of national importance in s6, the following s7 matters are relevant and shall be had regard to when preparing and deciding on the chapter:

- i. the efficient use and development of natural and physical resources;
- ii. maintenance and enhancement of the quality of the environment;
- iii. any finite characteristics of natural and physical resources; and
- iv. the effects of climate change.

5.3. Section 31 of the RMA outlines the functions of territorial authorities and includes (s31(1)(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; [...]."

- 5.4. In addition to the general responsibility in respect of natural hazards in section 31, territorial authorities also have specific powers in relation to subdivision. Section 106 of the RMA provides that a consent authority "may" refuse to grant a subdivision consent, or may grant a subdivision consent subject to conditions, if it considers that: *"the land in respect of which a consent is sought, or any structure on the land, is or is likely to be subject to material damage by erosion, fallen debris, subsidence, slippage, or inundation from any source"* or *"any subsequent use that is likely to be made of the land is likely to accelerate, worsen, or result in material damage to the land, other land, or structure by erosion, falling debris, subsidence, slippage, or inundation from any source"*.
- 5.5. Section 220(1)(d) provides that a council may impose conditions on subdivision consents for the protection of the land against "erosion, subsidence, slippage, or inundation from any source..."
- 5.6. Also of direct relevance is that 'natural hazard' is defined in s2 of the RMA as *"any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire, or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment"*.

The Local Government Act 2002 (LGA)

- 5.7. The LGA and in particular section 11A(d), which provides that local authorities must have particular regard to the contribution that the avoidance and mitigation of natural hazards makes to its communities and section 14 which emphasises the importance of the social, economic, and cultural interests of people and communities, the need to maintain and enhance the quality of the environment and the reasonably foreseeable needs of future generations.

The Building Act 2004

- 5.8. Territorial authorities have powers in respect of proposals for buildings on land subject to natural hazard risk under sections 71-74 of the Building Act 2004 (**Building Act**).
- 5.9. Sections 71-74 relate to the approval of building consents where the land on which a building is to be located is subject to a natural hazard (whereby a natural hazard for the purposes of these sections is defined as erosion, falling debris, subsidence, inundation and slippage).

5.10. I consider the above requirements are relevant insofar that territorial authorities have avenues in addition to the District Plan to manage natural hazard risk. Council has sought to approach the potential for overlaps or inconsistencies between Building Act requirements and the PDP by focusing the PDP provisions on land use and subdivision and leaving built form and structures to the Building Act.

Iwi Management Plans

5.11. When preparing or changing a district plan, section 74(2A) of the RMA states that Council's must "*take into account*" any relevant planning document recognised by an iwi authority and lodged with the territorial authority, to the extent that its content has a bearing on the resource management issues of the Queenstown Lakes District (**District**). Two iwi management plans are relevant:

- *The Cry of the People, Te Tangi a Taurira*: Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008 (MNRMP 2008); and
- *Kāi Tahu ki Otago* Natural Resource Management Plan 2005 (KTKO NRMP 2005)

Operative Otago Regional Policy Statement (1998) (Operative RPS)

5.12. Section 75(3)(c) of the RMA requires that a district plan prepared by a territorial authority must "*give effect to*" any regional policy statement.

5.13. The Operative RPS contains a number of objectives and policies that directly relate to natural hazards, as set out below:

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.*

5.14. As the Proposed Regional Policy Statement 2015 (the **PRPS**) has been notified and decisions on submissions have been released (see following section), I have focussed my analysis on the PRPS rather than the Operative RPS. Nonetheless, in my view, for the reasons outlined in the s32 report (**Appendix 3**), Chapter 28 gives effect to this policy framework.

Proposed Otago Regional Policy Statement 2015 (PRPS)

5.15. Section 74(2)(a) of the RMA requires that a district plan prepared by a territorial authority shall "have regard to" any proposed Regional Policy Statement. The PRPS was notified for public submissions on 23 May 2015 and decisions on submissions were notified on 1 October 2017.¹ The decisions version of the PRPS contains the following provisions that are directly relevant to the management of natural hazard risk.

[Note that these provisions are copied directly across from the decisions version of the PRPS and show the changes made from the notified version, whereby the changes are shown in ~~strike through~~ and underlining.]

Objectives

Objective 4.1 ~~3-2~~: Risk that natural hazards pose to Otago's communities are minimised.

Policies

Policy 4.1.13-2-1 Identifying natural hazards

Identify natural hazards that may adversely affect Otago's communities, including hazards of low likelihood and high consequence by considering all of the following:

- 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 4.1.23-2-2 ~~Natural~~ Assessing natural hazard likelihood

Using the best available information, assess ~~Assess~~ the likelihood of natural hazard events occurring, ~~over 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 4.1.33-2-3 ~~Natural~~ Assessing natural hazard consequence

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

- a) The nature of activities in the area;
- b) Individual and community vulnerability;
- c) Impacts ~~Impact~~ on individual and community health and safety;
- d) Impacts ~~Impact~~ on social, cultural and economic wellbeing;
- e) Impacts ~~Impact~~ on infrastructure and property, including access and services;

¹ Source: ORC website <http://www.orc.govt.nz/Publications-and-Reports/Regional-Policies-and-Plans/Regional-Policy-Statement/Otago-Regional-Policy-Statement-Review/>

- 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 ~~4.1.43-2.5~~ Assessing activities for natural hazard risk

Assess activities for natural hazard risk to people and communities, by considering all of the following:

- 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 ~~4.1.53-2.4~~ Natural Managing natural hazard risk

Manage natural hazard risk to people and communities, ~~including~~ with particular regard to all of the following:

- a) The risk ~~posed 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 ~~tolerance to risk; tolerability and risk; and~~
- e) Sensitivity of activities to risk.

Policy ~~4.1.63-2.6~~ Avoiding increased natural hazard risk

~~Manage~~ ~~Avoid increasing~~ natural hazard risk to people and communities, ~~including~~ by both:

- a) Avoiding activities that significantly increase risk including displacement of risk off-site; and
- b) Avoiding activities that increase risk in areas potentially affected by coastal hazards over at least the next 100 years.
- ~~b) Encouraging design that facilitates:~~
 - ~~i. Recovery from natural hazard events; or~~
 - ~~ii. Relocation to areas of lower risk.~~

Policy ~~4.1.73-2.7~~ Reducing existing natural hazard risk

Reduce existing natural hazard risk to people and communities, including by all of the following:

- 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 to people and communities; ~~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 to people and communities, and community tolerance of that risk, following significant natural hazard events.

Policy 4.1.93.2-8 ~~Precautionary~~ Applying a precautionary approach to natural hazard risk

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

Policy 4.1.93.2-9 ~~Protecting features and systems that provide hazard mitigation~~

~~Avoid, remedy or mitigate adverse effects on~~ 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 4.1.103.2-10 ~~Mitigating natural hazards~~

Give preference to risk management approaches that reduce the need for hard protection structures ~~mitigation measures~~ or similar engineering interventions, and provide for hard protection structures ~~mitigation measures~~ only when all of the following apply:

- 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 to people and communities, 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 4.1.113.2-11 ~~Hard protection structures~~ Locating hard mitigation measures

Enable the location of hard protection structures ~~mitigation measures~~ or similar engineering interventions on public land only when either or both of the following apply:

- 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 a facility for essential or emergency services.

Policy 4.1.123.4-3 ~~Lifeline~~ Designing lifeline utilities and facilities for essential or emergency services

Locate and design ~~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 4.1.133.4.4 Hazard Managing hazard mitigation measures, lifeline utilities, and essential and emergency services

Protect the functional and operational requirements functioning of hazard mitigation measures, lifeline utilities, and essential or emergency services, including by all of the following:

- 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~~
- d)e) Maintaining access to those measures, utilities or services for maintenance and operational purposes; ~~and~~
- e)f) Managing other activities in a way that does not restrict foreclose the ability of those mitigation measures, utilities or services to continue functioning.

Policy 4.5.13-8-4 Managing for urban growth and development

Manage urban growth and development ~~and creation of new urban land~~ in a strategic and co-ordinated way, by all of the following:

[...]

- c) Identifying future growth areas and managing the subdivision, use and development of rural land outside these areas to that achieve all of the following:

[...]

- v.vi. Avoid land with significant risk from natural hazards; [...].

Definitions:

Natural Hazard

Includes any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire, or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment.

Residual Risk

The risk remaining after the implementation or undertaking of risk management measures.

- 5.16. Chapter 28 was drafted with a focus on formulating an appropriate policy framework (objectives and policies) for the management of natural hazard risk. This exercise took place in the absence of certainty as to the final form of the PRPS and the direction it would set for identifying, managing and mitigating natural hazard risks in Otago.

5.17. The Otago Regional Council (**ORC**) has advised² the Council to treat all of the PRPS as being subject to appeal at this time and has confirmed that the following PRPS objectives and policies specifically relating to natural hazards are currently subject to appeals:

- (i) Objective 4.1;
- (ii) Policy 4.1.1 (d);
- (iii) Policy 4.1.3 (f);
- (iv) Policy 4.1.4;
- (v) Policy 4.1.5;
- (vi) Policy 4.1.6;
- (vii) Policy 4.1.7;
- (viii) Policy 4.1.8;
- (ix) Policy 4.1.10;
- (x) Policy 4.1.13; and
- (xi) Policy 4.5.1(c)(iii).

5.18. As such, there remains substantial uncertainty as to the final form of the PRPS natural hazards objective and policies. Once the PRPS appeals are resolved a future plan change or variation to the PDP may be required to give full effect to the new RPS.

5.19. At a broad level, I consider that Chapter 28 has regard to the PRPS by introducing a policy framework that takes a risk-based approach to natural hazards, whereby the degree of risk a natural hazard poses is the primary consideration to inform whether a proposal located on a site that is subject to a natural hazard should be approved. In considering the submissions received on the PDP, I have also had regard to the decisions version of the PRPS. Where possible, within the scope of submissions received, I have considered whether the relief sought would provide an opportunity to increase consistency with the decisions version of the PRPS.

5.20. As a general observation, however, I consider that the PRPS advocates for a more definitive and cautious approach with regard to natural hazard risk than that proposed by the notified Chapter 28 provisions. In particular the PRPS seeks 'avoidance' of development in locations affected by significant hazards while the notified Chapter 28 provisions only require avoidance where risks are intolerable while "acknowledging that this will not always be practicable in developed areas."³ I understand, that the application of the word 'avoid' throughout the decisions version of the PRPS was the subject of submissions and is now the subject of a subsequent appeal by Dunedin City Council⁴ (**DCC**). The PRPS decisions document released

² Email and attachment from James Adams (ORC Policy Analyst) on 23 January 2017 (11.25am) and email from James Adams to Ian Bayliss on 8 February 2017 (9:54am). Emails available on request.

³ Redrafted Chapter 28 Policy 28.3.2.1.

⁴ See Appeal 84 in relation to the proposed Otago Regional Policy Statement between Dunedin City Council (appellant) and the Otago Regional Council (respondent):

on 1 October 2016 provides reasons for decisions on submissions seeking amendments to the use of the term 'avoid' in various PRPS objectives and policies.⁵ Most notably, the decisions document provides the following interpretation of how ORC considers the term 'avoid' should be applied:

"While the PRPS provisions require the avoidance of certain effects, it does not automatically follow that an activity is prohibited. What is prohibited are adverse effects on particular values. If the adverse effects from that activity on those values can be avoided, then the activity can be undertaken."

5.21. There is therefore uncertainty as to how the word 'avoid' is to be interpreted in the context of the PRPS, and the appeal process will assist with providing certainty in this regard.

5.22. The s32 analysis⁶ prepared by ORC for the PRPS acknowledges that the level of natural hazard risk that is tolerable to communities should not be predetermined, and rather should be determined in consultation with the communities affected by natural hazards. The level of tolerance within the community will inform the threshold for what is considered to pose a 'significant risk'. This is consistent with the approach taken in the notified version of Chapter 28.

5.23. The s32 analysis⁷ for the PRPS also acknowledges that technical assistance from ORC will be required to give full effect to the PRPS. I agree and note that in particular, ongoing technical work will need to be undertaken in conjunction with the ORC to update the natural hazards database (discussed in more detail at paragraph 6.3 below).

5.24. I note that Council made submissions on the natural hazards objectives and policies of the PRPS. The following summary is taken from the Statement of Evidence⁸ prepared by Matthew Paetz presented for the Council at the PRPS hearing, and seeks to highlight the issues that the decisions version of the PRPS continues to raise for the District:

- As 'significant' risk is not defined, or has not yet been determined, there is uncertainty as to the effect of the objectives and policies relating to natural hazards.
- Whilst QLDC supports the approach of avoiding development in greenfield areas subject to significant hazard risk, QLDC's objectives for reducing urban sprawl and

<http://www.orc.govt.nz/Documents/Publications/Regional/RPS/Appeals/ENV-2016-CHC-84%20Dunedin%20City%20Council.pdf>. I note that the Council has joined the DCC appeal as a s274 party in support

⁵ See Proposed Regional Policy Statement for Otago: Decisions of Council, section 4.5, pages 16 – 19 <http://www.orc.govt.nz/Documents/Publications/Regional/RPS/Decisions%20of%20Council%20on%20RPS.pdf>.

⁶ PRPS s32, page 28, paragraph 3 <http://www.orc.govt.nz/Documents/Publications/Regional/RPS/Proposed%20RPS%20S32%20Evaluation%20Report%2023%20May%202015.pdf>.

⁷ PRPS s32, page 30 <http://www.orc.govt.nz/Documents/Publications/Regional/RPS/Proposed%20RPS%20S32%20Evaluation%20Report%2023%20May%202015.pdf>.

⁸ Full submission available on request.

improving efficient use of existing urban areas will necessitate further infill within existing urban areas. As such the complete avoidance of natural hazard risk may not be appropriate or achievable.

- The social and economic consequences of 'avoidance' of natural hazard risk are likely to be significant for the District, given that existing development may be within areas of 'significant risk'. It is not possible to fully appreciate the costs and benefits of avoidance strategies without an understanding of what 'significant risk' is, or where these areas may be.
- QLDC seeks an alternative approach that recognises that within urban limits there may be natural hazard risks and these risks need to be appropriately mitigated or reduced to tolerable levels. This could be achieved by widening the scope of notified Policies 3.2.6⁹ and 3.2.7¹⁰ and would still achieve the goal of risk reduction.
- Further clarification is sought as to ORC's understanding of what the concept of 'tolerability' means, in particular in regard to the roles and responsibilities of District and Regional Councils in determining a community's 'tolerance' to natural hazard risk. QLDC supports an approach that provides territorial authorities with the responsibility to determine, in conjunction with their community, what their tolerance of natural hazard risk is, and to identify appropriate tools and methods to manage this risk.
- Overall QLDC seeks greater flexibility within the policy approach to enable consideration of hazards by means appropriate for the local context.

5.25. I note that QLDC has joined the PRPS appeal process as a s274 party in relation to the above matters.

Strategic Direction – Chapter 3 of the Proposed District Plan

5.26. The following objective and policy in the notified version of the Strategic Direction Chapter directly relate to natural hazards management:

Objective 3.2.2.2: 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.

5.27. The hearing of submissions received on the Strategic Direction Chapter of the PDP occurred between the 7th and 23rd of March 2016. One submission point was received regarding the above policy and objective, namely submission point 806.31 (Queenstown Park Limited (**QPL**)).

⁹ PRPS decisions version Policy 4.1.6.
¹⁰ PRPS decisions version Policy 4.1.7.

5.28. The submission point¹¹ seeks the following relief:

"Either

- *delete objective [3.2.2.2] and policy [3.2.2.2.1]; or*
- *if retained amend for consistency with the RMA in particular, "addressing" should be replaced with "mitigated".*

5.29. The reasons for the relief provided by the submitter state the following:

"Clarification required. All land is subject to natural hazards, it is the degree of risk that presents the need to manage development in these areas."

5.30. Council's Reply prepared by Mr Matthew Paetz¹² recommended that Policy 3.2.2.2.1 remain unchanged, and recommended that Objective 3.2.2.2 be reworded as follows:

Objective 3.2.2.2: ~~Manage d~~*Development in areas affected by natural hazards is appropriately managed.*

5.31. This change to Objective 3.2.2.2 is not in response to the changes suggested by QPL, rather it responds to feedback from the Hearings Panel regarding the style used for writing objectives, which was later clarified in a Procedural Minute.¹³

5.32. I consider that Chapter 28 with the incorporation of amendments recommended in this report (and as shown in **Appendix 1**) is consistent with both the notified and reply versions of Objective 3.2.2.2 and Policy 3.2.2.2.1.

6. BACKGROUND – OVERVIEW OF THE ISSUES

6.1. The purpose of Chapter 28 is to provide a policy framework for the management of natural hazard risk throughout the District. Chapter 28 introduces a 'risk-based' policy framework to planning for natural hazards. Broadly speaking, this approach seeks to ensure that the response to any particular hazard is commensurate to the level of risk posed.

¹¹ Replacement Submission 806, page 11, row 4.25.

¹² Strategic Directions Hearing – Recommended Revised Chapter – Reply 07/04/2016.

¹³ Paragraphs 6 -10 Fourth Procedural Minute, 8 April 2016.

Key Issues Identified

Section 32 Report

6.2. The following issues were considered when reviewing the natural hazards provisions of the ODP (these are taken from the s32 attached in **Appendix 3**):

- Existing settlements are subject to natural hazard risk and there is a need to recognise the existence of these hazards when undertaking further development within these settlements.
- In some instances the natural hazard risk is significant, and development that increases this risk or fails to address this risk appropriately should be discouraged.
- Council's knowledge of natural hazards in the District is continually growing as further study is undertaken. Therefore it is important that the approach to addressing natural hazards in the District Plan can easily accommodate new information as it arises.
- Mapping of natural hazards is an important 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 District Plans is flooding.¹⁴ All hazards are mapped in the Council's Natural Hazards Database and compiled for regulatory and information purposes using an on-line geographic information system (GIS).
- Presently there is a lack of acknowledgement that Council is responsible for addressing natural hazards under a number of different pieces of legislation such as the RMA, Local Government Act, Building Act and the Civil Defence and Emergency Management Act. As a consequence, the District Plan is one tool amongst others to manage natural hazard risk.
- Private property rights are a relevant consideration in the wider approach to addressing natural hazard risk. District Plan provisions that are overly restrictive are counter-productive to sustainable management and the continued growth of the District. At the same time natural hazard risks that are overlooked or inadequately managed can impose significant costs on other parties when land is developed.
- The Operative District 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 some assessment criteria that are worded differently across zones meaning there is a potential for an inconsistent approach to the assessment of natural hazards through the resource consent process.

¹⁴

Upon review I have found that both the ODP and PDP maps include a historical flood zone for the Kingston, and Glenorchy townships, and Kinloch. However, I have not identified any other historical flood zones in the ODP (or PDP) maps.

Mapping of hazards within the PDP

- 6.3. An overview of hazards affecting the District is detailed in a report prepared by Opus International Consultants Ltd (2012) (**Appendix 3a**). I note that not all the recommendations of the Opus report have been synthesised into Chapter 28. In particular, the report recommends the mapping of hazards within the District Plan. The issue of whether or not to map hazards was work-shopped with elected members of the Council (**Elected Members**) during the drafting of Chapter 28, and Elected Members indicated that an approach that does not involve mapping was their preference. I understand that this was due to the cost and time implications involved with interrogating and refining the information currently held in the Natural Hazards Database, as well as the Schedule 1 RMA plan change process. Mapping hazards in the PDP would also have resulted in a significant departure from the ODP approach, and the Elected Members were of the view that the current approach should be continued and improved where possible.
- 6.4. Once operative, ongoing review of the efficiency and effectiveness of the PDP, as required by the RMA, may lead to the introduction of subsequent changes to the approach to natural hazards through a plan change, which may in the future result in the introduction of some mapping of hazards.
- 6.5. As discussed in the s32 evaluation for Chapter 28, continuing to use the Natural Hazards Database as the main repository for mapped hazards information has benefits. Most notably it means that the database is able to be regularly updated without the need for a plan change. This means that the database can hold the most up to date hazards information. Given that any relevant hazards information in the database is included in LIM reports, this in my view results in a high level of transparency regarding the natural hazards information held by Council.

Tolerability

- 6.6. Chapter 28 introduces the concept of 'tolerability' to the District Plan. As noted in Chapter 28, this concept has been handed down through the RPS (Policy 11.5.6) and PRPS (decisions version Policies 4.1.5(c) & (d) and 4.1.10(a)).
- 6.7. The concept of 'tolerability' enables the opportunity for a community's tolerance to natural hazard risk to be considered. The s32 evaluation accompanying the PRPS¹⁵ notes that the process for determining 'risk tolerance' is based on community input, resulting in a social benefit in the form of community buy-in. I concur with this view. The s32 also acknowledges that the concept of tolerability creates uncertainty as to how the PRPS will be given effect to, as

¹⁵ PRPS s32, page 30
<http://www.orc.govt.nz/Documents/Publications/Regional/RPS/Proposed%20RPS%20S32%20Evaluation%20Report%2023%20May%202015.pdf>

each territorial local authority within the Otago Region (**Region**) will have varying levels of tolerance to natural hazard risk. This is an important consideration, in particular given that the economic and social impact of natural hazard management will vary throughout the Region, in particular for areas of existing development that are subject to natural hazard risk. In summary, I consider that the concept of 'tolerance' to natural hazard risk is an important addition to the District Plan.

- 6.8. The concept of 'tolerability' is to be considered when determining whether the risk posed by natural hazards is 'significant'. In the absence of maps showing areas of significant risk, 'significance' will be determined on a case-by case basis. As such, Policies 28.3.2.2 and 28.3.2.3 of Chapter 28 are relatively prescriptive in order to give PDP users considerable guidance as to the information requirements and considerations for resource consent applications.

Summary

- 6.9. In summary, following consideration of the submissions I believe that the above issues remain relevant. The changes I recommend in response to submissions received seek to refine the objectives and policies, rather than fundamentally altering the approach to the management of natural hazard risk proposed by the notified version of Chapter 28.

7. SUBMISSIONS

- 7.1. The RMA, as amended in December 2013, no longer requires a report prepared under s42A or the Council decision to address each submission point but, instead, requires a summary of the issues raised in the submissions.
- 7.2. Ninety-nine submission points and 38 further submission points were received on notified Chapter 28.
- 7.3. A summary of submission points received and a recommendation on whether the submission is recommended to be rejected, accepted, accepted in part or transferred to a future hearing is attached as **Appendix 2**. I have read and considered all submissions, including further submissions.

8. ANALYSIS

- 8.1. I have set out my analysis of the submissions under the following headings:

Group 1 – Relief sought by the Otago Regional Council (ORC)

Group 2 – Relief sought regarding specific natural hazards

Group 3 – *Pro forma* submission points

Group 4 – Submission points seeking specific changes to the wording of provisions

8.2. Where a provision has not been submitted on or where the submission is not accompanied by a clear basis or reasoning, the submission point is unlikely to have been discussed in this report (although recommendations in respect of all submissions received is set out in **Appendix 2**).

9. GROUP 1 – RELIEF SOUGHT BY ORC

9.1. Submission points made by the ORC (798) are addressed in turn below.

Submission points 798.13 and 798.14

Submission point	Changes sought by submitter ¹⁶
798.13; opposed by FS1182.1	ORC notes that objectives and policies are missing relating to avoiding and reducing natural hazard risks and applying a precautionary approach.
798.14; opposed by FS1182.2	ORC requests that Objectives 3.1 and 3.2 and Policies 3.2.6, 3.2.7 and 3.2.8 ¹⁷ of the Proposed RPS are reflected in the Natural Hazards section to provide for: <ul style="list-style-type: none">•avoiding natural hazard risk; and•reducing natural hazard risk; and•applying a precautionary approach to natural hazard risk.

9.2. ORC submit that objectives and policies are missing relating to avoiding and reducing natural hazard risks and applying a precautionary approach to natural hazard risk.

9.3. With regard to risk avoidance, I note that notified PRPS Policy 3.2.6 requires the avoidance of *increased* natural hazard risk, and is in no way an absolute prohibition on avoiding risk. In addition, ORC's decisions on this policy (PRPS decisions version Policy 4.1.6) has amended it to say *manage natural hazard risk*, rather than *avoid increasing risk* as per the notified version. However the policy title remains as notified ("Avoiding increased natural hazard risk") and part (b) of the policy still requires the avoidance of activities that significantly increase risk. In my view the changes introduced to the decision version of the policy to replace "avoid increasing" with "manage" do not significantly alter the requirements of the notified version. These

¹⁶ The numbering of the PRPS provisions in this column refers to the notified numbering which has been subsequently altered through the decisions version of the PRPS that was notified on 1 October 2016.

¹⁷ The decisions version of the PRPS has resulted in the following relevant changes: Objective 3.1 has been deleted; Objective 3.2 has been renumbered as Objective 4.1 with a minor (non-policy) amendment to the issue statement; Policy 3.2.6 has been renumbered as Policy 4.1.6 and the policy has been altered to *manage natural hazard risk* rather than *avoid increasing natural hazard risk*; Policy 3.2.7 has been renumbered as Policy 4.1.7 and minor changes for clarification have been introduced; Policy 3.2.8 has been renumbered to Policy 4.1.8 and minor changes for clarification have been introduced.

provisions are relevant in terms of what the PDP must take into account / give effect to, respectively.

- 9.4. Policy 28.3.2.1 of the PDP provides for instances when avoidance is appropriate. The policy also provides an exception by acknowledging that avoidance may not always be practicable in developed urban areas. Policy 28.3.2.2 of the PDP sets out parameters for instances when subdivision and development should be enabled. These two policies work together to set out how the Plan's objectives in relation to natural hazards will be achieved. In my view, the effect of Policy 28.3.2.2 would be that discretionary (including restricted discretionary where there is a relevant matter of discretion) and non-complying proposals that do not meet the tests contained in the policy could be declined (and in declining the proposal, risk would be appropriately managed).¹⁸
- 9.5. With regard to risk reduction, Policy 28.3.1.5 directs the following... "*[w]here practicable, reduce the risk posed by natural hazards to the existing built environment and the community.*" The policy framework introduced by Chapter 28 therefore includes risk reduction, but acknowledges that there may be instances reducing risk is not practicable. In my view this is appropriate because it would be unreasonable to require risk reduction when, for instance, the existing risk is low.
- 9.6. Redraft Policy 28.3.2.2 enables proposals that (amongst other considerations) do not... "*[...]accelerate or worsen the natural hazard and/or its potential impacts risk to an unacceptable level.*"
- 9.7. With regard to applying ORC's submission point regarding the precautionary approach, the amendment sought would give effect to PRPS decisions version Policy 4.1.8:

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

- 9.8. I note that the PRPS does not define *precautionary approach*. However I understand it to mean that if, at the time a decision has to be made, there is scientific uncertainty about the effects of an activity on the environment but if the effects occur they are expected to be serious or irreversible, the Council may require the proponent of a proposal to provide all available information, decline a resource consent or impose conditions on a consent.

¹⁸ I have recommended amendments to Policies 28.3.2.1 and 28.3.2.2. The recommended changes to Policy 28.3.2.1 are discussed in paragraphs 12.47 to 12.51, and those recommended for Policy 28.3.2.2 are discussed in paragraphs 12.52 to 12.57 and shown in **Appendix 1**. In my view, the reasoning above applies to the recommended redrafted versions of the policies.

9.9. PRPS decisions version Policy 4.1.8 is given effect through Policy 28.3.2.3,¹⁹ whereby the onus will be on the resource consent applicant to provide an assessment that requires consideration of risk on a site-specific basis. This, in my view presents an efficient approach.

9.10. I will consider any additional comments presented by ORC at the hearing. However at this time I am unable to support the requested relief.

9.11. **Recommendation:** Reject submission points 798.13 and 798.14; accept FS1182.1 and FS1182.2 as shown in **Appendix 2**.

Submission points 798.18 and 798.19

Submission point	Changes sought by submitter
798.18	<p>In respect of proposed rule 28.3.2.2:</p> <p>ORC supports giving clear policy guidance in Policy 28.3.2.2 to help identify where risk is intolerable and therefore when a proposal should be declined. This gives better effect to the natural hazard provisions in the Proposed RPS.</p> <p>However, ORC considers it is not appropriate to have new development occurring where natural hazard risks, and residual risks, are intolerable for the community, now or in the future, even if managed or mitigated (as proposed in Policy 28.3.2.1).</p>
798.19	<p>In respect of proposed rule 28.3.2.1:</p> <p>ORC supports giving clear policy guidance in Policy 28.3.2.2 to help identify where risk is intolerable and therefore when a proposal should be declined. This gives better effect to the natural hazard provisions in the Proposed RPS.</p> <p>However, ORC considers it is not appropriate to have new development occurring where natural hazard risks, and residual risks, are intolerable for the community, now or in the future, even if managed or mitigated (as proposed in Policy 28.3.2.1).</p>

9.12. These submission points by the ORC oppose Policy 28.3.2.1 insofar as the policy leaves open the opportunity for development in locations that have existing development and are subject to intolerable natural hazard risk.

9.13. I note that Policy 28.3.2.2²⁰ would also apply to the consideration of whether any such development should be approved.

9.14. I also note that, as the parts of the District that have 'intolerable' natural hazard risk have not been identified, we cannot quantify the effect of implementing a strict 'avoidance' policy, such as that sought by the ORC. Taken literally an 'avoid' policy would require a prohibition on such

¹⁹ The recommended changes to notified Policy 28.3.2.3 are discussed in paragraphs 12.59 to 12.64 and shown in **Appendix 1**. In my view, the reasoning above applies to the recommended redrafted versions of the policies.
²⁰ Both as notified and redrafted.

development meaning that an application for such a proposal can't even be considered. There is no clear evidence that this approach is justified at this time in my view.

- 9.15. In the event that existing development is found to be within an area of intolerable risk, in my view a policy of avoidance would mean that any further development on that site could not occur, including renewal of existing development. I consider that there should be the opportunity for consideration of renewal if the result is that the natural hazard risk is not significantly increased. This approach would also provide the opportunity to decrease risk by implementing mitigation measures to protect existing development.
- 9.16. It is my view that the policy approach suggested by ORC may mean that all development, including mitigation, would be prohibited in such areas. I note, however, that the use and interpretation of the word 'avoid' throughout the PRPS is subject to an appeal by DCC and QLDC has applied to join the appeal as a s274 party in support of the DCC's position.
- 9.17. Consequently there remains significant uncertainty regarding the application of the PRPS Policies that use the word 'avoid' including most notably PRPS decisions version Policies 4.1.6 and 4.5.1(iii)(v).
- 9.18. I will consider any additional comments presented by ORC at the hearing. However at this time I am unable to support the requested relief.
- 9.19. **Recommendation:** Reject submission points 798.18 & 798.19 as shown in **Appendix 2**.

Submission point 798.20

Submission point	Changes sought by submitter
798.20	ORC request Policy 28.3.2.3 is amended to recognise that areas subject to natural hazard risk have ongoing maintenance needs which should not incur additional cost to the wider community.

- 9.20. The submission point requests that Policy 28.3.2.3 is amended to recognise that areas subject to natural hazard risk have ongoing maintenance needs which should not incur additional cost to the wider community.
- 9.21. Policy 28.3.2.2²¹ sets out parameters for the grant of consent for subdivision and development on land subject to natural hazards, and (as recommended to be redrafted in **Appendix 1**)

²¹ Both as notified and redrafted. My recommended changes to notified Policy 28.3.2.2 are discussed in paragraphs 12.52 to 12.58 and shown in **Appendix 1**.

includes that consent should be allowed where the proposed activity does not... "[...] *Require additional works and costs that would be borne by the community public.*"

9.22. I consider that redrafted Policy 28.3.2.2 sufficiently addresses the relief sought and no amendments are necessary.

9.23. **Recommendation:** Reject submission point 798.20 as shown in **Appendix 2**.

10. GROUP 2 – RELIEF SOUGHT REGARDING SPECIFIC NATURAL HAZARDS

10.1. Five submission points were received regarding the treatment of particular hazards in the PDP. These submission points are addressed in turn below.

Submission point 42.3 – Cardrona Gravel Aquifer

Submission point	Changes sought by submitter
42.3 (J, E & ML Russell & Stiassny); opposed by FS1300.3	Include in the Medium Density Zone, or in another appropriate chapter of the proposed Plan: <ul style="list-style-type: none"> (i) Objectives and policies raising the presence of the Cardrona Gravel Aquifer and its potential effect on earthworks and residential development; (ii) A rule requiring specific consideration of earthworks and building with reference to the Cardrona Gravel Aquifer; (iii) The requirement for engineering assessment and notification of any applications involving development in areas likely to be significantly impacted by the Cardrona Gravel Aquifer.

10.2. J, E & ML Russell & Stiassny request that provisions acknowledging the presence of the Cardrona Gravel Aquifer be introduced, including a rule framework for earthworks and residential development on land potentially affected by the aquifer.

10.3. Plan Change 49: Earthworks to the ODP was made operative on 30 June 2016 and introduced a new Earthworks Chapter (Chapter 22) to the ODP. The chapter is likely to be introduced to the PDP in the same format and with the similar content as in the ODP through Stage 2 of the District Plan Review, as far as it applies to the geographic area being reviewed through the district plan review.²²

10.4. Specifically, ODP Chapter 22²³ includes the following provisions that have relevance to the Cardrona Aquifer:

²² See memorandum of counsel filed by Queenstown Lakes District Council on 23 November 2016 <http://www.qldc.govt.nz/assets/Uploads/Planning/District-Plan/Hearings-Page/Memorandums/General/S0001-QLDC-ScottS-Memorandum-Regarding-Approach-to-Stage-1-and-Stage-2-28631695-v-1.pdf>

²³ ODP Chapter 22 Earthworks Policies: http://www.qldc.govt.nz/assets/OldImages/Files/District_Plan/District_Plan_Volume_1/Section-22-Earthworkws/22-Earthworks-July-2016.pdf

- i. Reference to the 'Cardrona Alluvial Ribbon' in the Chapter Purpose 22.1 (paragraph 6).
- ii. Objective 6: *Maintain or improve water quality of rivers, lakes and aquifers.*
- iii. Policy 6.2: *Avoid earthworks adversely affecting water aquifers including the Hawea Basin, Wanaka Basin, Cardrona alluvial ribbon and Wakatipu Basin aquifers and other lesser aquifers.*
- iv. Rule 22.3.2.3 requires Restricted Discretionary activity consent for activities that do not comply with one or more Site Standards, including Site Standard 22.3.3(v):

22.3.3(v) Water bodies

- (a) *Earthworks within 7m of the bed of any water body shall not exceed 20m³ in total volume, within one consecutive 12 month period.*
 - (b) *Any material associated with earthworks activity shall not be positioned within 7m of the bed of any water body or where it may dam, divert or contaminate water.*
 - (c) *Earthworks shall not:*
 - (i) *cause artificial drainage of any groundwater aquifer;*
 - (ii) *cause temporary ponding of any surface water.*
- v. Rule 22.3.2.3(b) sets out the following matters in respect of which Council has reserved discretion over:
- (i) *The nature and scale of the earthworks*
 - (ii) *Environmental protection measures*
 - (iii) *Remedial works and revegetation*
 - (iv) *The effects on landscape and visual amenity values*
 - (v) *The effects on land stability and flooding*
 - (vi) *The effects on waterbodies*
 - (vii) *Noise.*

10.5. Maps C2²⁴ and C3²⁵ of the Otago Regional Council Water Plan 2015 show the extent of the Cardrona Gravel Aquifer and the Cardrona Alluvial Ribbon Aquifer.

10.6. It is my view that, despite ODP Chapter 22 making specific reference to the Cardrona Alluvial Ribbon Aquifer (and not the Cardrona Gravel Aquifer), the policies and relevant rules would also apply to the Cardrona Gravel Aquifer. This is reflected in the scope of Rule 22.3.3(v)(c)(i) (above), which refers to *any* groundwater aquifer.

ODP Chapter 22 Earthworks Rules:

http://www.qldc.govt.nz/assets/OldImages/Files/District_Plan/District_Plan_Volume_1/Section-22-Earthworkws/22-Earthworks-RULES-July-2016.pdf

²⁴ Web reference: <http://www.orc.govt.nz/Documents/Publications/Regional/Water/Map%20C2.pdf>

²⁵ Web reference: <http://www.orc.govt.nz/Documents/Publications/Regional/Water/Map%20C3.pdf>

10.7. It is my view that the ODP Chapter 22 provisions, once incorporated into the PDP through Stage 2 of the District Plan Review, will be appropriate to address the matters raised by Russell & Stiassny, as earthworks causing artificial drainage of the aquifer will be considered through the resource consent process. ODP Chapter 22 does not impose a rule framework for the development associated with the earthworks, and in my view this would not be necessary, as it is the earthworks exposing the aquifer which is the issue.

10.8. In my view no amendments are necessary to Chapter 28. I am also of the view that it is appropriate for the rules relating to earthworks affecting an aquifer to be located in the earthworks chapter, rather than Chapter 28. The submitter will have the opportunity to submit on the relevant ODP Chapter 22 provisions through the Stage 2 notification process.

10.9. **Recommendation:** Reject submission point 42.3; accept FS1300.3 in part as shown in **Appendix 2.**

Submission point 564.1 – Bible Stream

Submission point	Changes sought by submitter
564.1 (Glenorchy Community Association Committee)	The ORC and QLDC update the Otago Natural Hazards Database with flooding information on the Bible Stream and remove any flood classification that is incorrect, in particular any mitigation work.

10.10. The Glenorchy Community Association Committee seeks that the ORC and the Council update the Otago Natural Hazards Database with flooding information on Bible Stream and remove any flood classification that is incorrect, in particular relating to any mitigation work.

10.11. I note that the database is proposed to be kept outside of the PDP to retain the ability to update it without the need for a plan change. I therefore consider that the submission point is not in scope of the District Plan Review.

10.12. **Recommendation:** Reject submission point 564.1 as shown in **Appendix 2.**

Submission points 849.1, 849.2 and 465.1 – Fire risk

Submission point	Changes sought by submitter
849.1 (Otago Rural Fire Authority); supported by FS1125.1	The submitter requests that the District plan better reflects the high fire danger associated with living in areas such as Mt Iron and the Queenstown Redzone by allowing the residents to remove flammable vegetation within the "Priority Zones" as identified in the "FireSmart homeowners manual published by the NRFA.

849.2 (Otago Rural Fire Authority)	The submitter requests that the District plan better reflects the high fire danger associated with living in areas such as Mt Iron and the Queenstown Redzone by identifying and mitigating vegetation fire risk in the building planning process.
465.1 (Leigh Overton)	The inclusion of some detail relating to the level of fire risk in this District and the need for this matter to be recognized as being important when considering planning and development.

10.13. These submission points from the Otago Rural Fire Authority and Leigh Overton relate specifically to fire risk in the District. Chapter 28 acknowledges fire risk as a natural hazard affecting this District (see 28.2), whereas it is not specifically acknowledged as a natural hazard in the ODP hazard provisions. It is also noteworthy that the PRPS (notified and decisions version) includes fire in its definition of *natural hazard*, which directly aligns with the definition of *natural hazard* in section 2 RMA.

10.14. As mentioned above, it is not proposed to introduce hazard mapping in the PDP maps. However, I agree that fire hazard information will need to be introduced to the Natural Hazards Database. Combined with the acknowledgement of fire risk as a natural hazard in Chapter 28, this will result in fire risk being treated in the same manner as other known natural hazards present in this District.

10.15. I understand that the 'Red Zones' mentioned in the Otago Rural Fire Authority's submission point 849.2 are the parts of the District where fires and fireworks are strictly prohibited. These locations are shown on the Fire Permits pages of the QLDC website.²⁶ In order for these areas to be specifically considered for inclusion on Planning Maps or introduced to the Natural Hazards Database, the rationale and basis for the physical extent of the Redzone areas would need to be interrogated so as to be defensible. It is my view that the introduction of fire hazard information to the Natural Hazards Database would be appropriate once such an interrogation has occurred.

10.16. As also mentioned above, the Natural Hazards Database will sit outside the District Plan (and will not be incorporated by reference), so it can be updated without the need for a plan change / Schedule 1 process. This means that the most up-to-date hazards information can be made available to the public without delay. I acknowledge that this approach provides less certainty and does not afford affected parties to contest the veracity of hazard information in the Natural Hazards database that may constrain development through a Schedule 1 or appeal process. However, on balance the dynamic nature of hazard information and the challenges of keeping abreast of new information through plan changes make a non-statutory approach the most appropriate approach in my view.

10.17. I note that changes to rural provisions were considered in Hearing Stream 02 that balance the need for vegetation retention versus managing fire risk.

²⁶ Web reference: <http://www.qldc.govt.nz/services/permits/fire-permits/>

10.18. **Recommendation:** Reject submission points 849.1, FS1125.1, 849.2 and 465.1 as shown in **Appendix 2.**

11. GROUP 3 – PRO FORMA SUBMISSION POINTS

11.1. Thirty-three submission points were received from a number of submitters seeking the following identical relief (my numbering added):

*"[1] Reconsider the extensive number of hazard related policies,
[2] remove unnecessary tautology and
[3] ensure they are focussed on significant hazards only".*

11.2. Specifically, these submission points are as follows:

- 632.67 (RCL Queenstown Pty Ltd, RCL Henley Downs Ltd, RCL Jacks); supported by FS1097.639; opposed by FS1217.68,²⁷ FS1219.68, FS1252.68, FS1277.71, FS1316.67, FS1275.241, FS1283.181.
- 633.21 (IHG Queenstown Ltd and Carter Queenstown Ltd); opposed by FS1139.22 and FS1191.21.
- 672.35 (Watertight Investments Ltd).
- 636.13 (Crown Range Holdings Ltd).
- 643.17 to 20 (incl) (Crown Range Enterprises).
- 688.12 to 15 (incl) (Justin Crane and Kirsty Mactaggart).
- 693.18 to 21 (incl) (Private Property Limited).
- 694.26 to 29 (incl) (Glentui Heights Ltd).
- 696.35 to 38 (incl) (Millbrook Country Club Ltd).
- 700.4 to 7 (incl) (Ledge Properties Ltd and Edge Properties Ltd).
- 702.15 to 18 (incl) (Lake Wakatipu Stations Limited).
- 724.3 (Queenstown Gold Ltd).

11.3. In response to the first and second parts of the requested relief, I have considered the number of policies contained in Chapter 28 and whether there is an issue with repetition.²⁸ In my view the natural hazard related policies in the ODP are too few, such that they offer limited guidance or certainty to Plan users.

11.4. For clarity, the ODP natural hazards objectives and policies are listed below:

²⁷ This submission has been withdrawn. The Council received notice of the withdrawal on 19 January 2016.

²⁸ 'Tautology' is defined by the Oxford Dictionary as '[t]he saying of the same thing twice over in different words, generally considered to be a fault of style.'

4.8.3 Objectives and Policies

- Objective 1:** *Avoid or mitigate loss of life, damage to assets or infrastructure, or disruption to the community of the District, from natural hazards*
- Policy 1.1:** *To increase community awareness of the potential risk of natural hazards, and the necessary emergency responses to natural hazard events.*
- Policy 1.2:** *To continually develop and refine a hazards register in conjunction with the Otago Regional Council, as a basis for Council decisions regarding subdivision and building development.*
- Policy 1.3:** *In conjunction with the Otago Regional Council to continually assess the need for additional protection measures either through the District Plan or as protection works.*
- Policy 1.4:** *To ensure buildings and developments are constructed and located so as to avoid or mitigate the potential risk of damage to human life, property or other aspects of the environment.*
- Policy 1.5:** *To ensure that within the consent process any proposed developments have an adequate assessment completed to identify any natural hazards and the methods used to avoid or mitigate a hazards risk.*
- Policy 1.6:** *To discourage subdivision in areas where there is a high probability that a natural hazard may destroy or damage human life, property or other aspects of the environment.*
- Policy 1.7:** *To avoid or mitigate the likelihood of destruction or damage to residential units and other buildings constructed or relocated into flood risk areas.*

11.5. The ODP therefore contains a total of 1 objective and 7 policies that relate to natural hazards, whereas Chapter 28 of the PDP has a total of 3 objectives and 14 policies. Chapter 28 of the PDP does not contain an 'Implementation Methods', 'Explanation and Principal Reasons for Adoption' or an 'Environmental Results Anticipated' section. Aspects of these sections of the ODP have been synthesised into the objectives and policies in Chapter 28 of the PDP, in particular within Objective 28.3.3, and Policies 28.3.3.1 and 28.3.3.2 to 28.3.3.4.

11.6. No submissions were received seeking the reinstatement of the ODP natural hazards 'Implementation Methods', 'Explanation and Principal Reasons for Adoption'²⁹, and 'Environmental Results Anticipated'³⁰ sections of the ODP.

11.7. The PDP policies give specific consideration to infrastructure (Policies 28.3.1.1 and 28.3.2.5), which is not acknowledged in the ODP. They also seek to provide detailed guidance regarding matters that will be considered when determining whether or not consent should be granted

²⁹ The 'Implementation Methods' and 'Explanation and Principal Reasons for Adoption' sit within provision 4.8.3 of the ODP.

³⁰ Provision 4.8.4 of the ODP.

(Policy 28.3.2.2) and the information requirements that will inform any decision (Policy 28.3.2.3). In my view this suite of policies is necessary and appropriate to provide Plan users with adequate certainty across a range of foreseeable hazard scenarios.

11.8. I will consider any further information the submitters present at the hearing to further furnish the basis for the relief sought, including specifically which objectives and/or policies the submitters consider should be truncated or merged. However without any specific details I am unable to support the relief sought in the first and second parts of the submission point.

11.9. In response to the third part of the relief sought, neither the ODP, the PDP, the RPS or the PRPS define what constitutes 'significant risk' and this would be determined on a case-by-case basis. In my view it is not practical to establish levels of risk with adequate certainty in the drafting of a district plan as natural hazard risks can vary in significance greatly, depending on their type, frequency or likelihood of occurring, the extent of potential consequences and the likely range of activities that result from a given development. As such, in my view it is better that the 'significance' of a risk is informed by the assessment required by redrafted Policy 28.3.2.3, and the grant of consent should be determined by the application of redrafted Policy 28.3.2.2 and any other relevant Chapter 28 policies.

11.10. I consider the method proposed by the PDP, which provides for the significance of risk to be determined on a case-by-case basis, is appropriate in the absence of District Plan maps which map a full range of likely known levels of risk. The community's tolerance is also a factor in determining the significance of risk. This approach also enables the specific risk profile of any proposal to be considered against the type and severity of natural hazard(s) present. This approach also in my view implements the precautionary approach, thereby giving effect to the decisions version of PRPS Policy 4.1.8.

11.11. **Recommendation:** Reject submission points 632.67 (RCL Queenstown Pty Ltd, RCL Henley Downs Ltd, RCL Jacks), 633.21 (IHG Queenstown Ltd and Carter Queenstown Ltd), 672.35 (Watertight Investments Ltd), 636.13 (Crown Range Holdings Ltd), 643.17 to 20 (incl) (Crown Range Enterprises), 688.12 to 15 (incl) (Justin Crane and Kirsty Mactaggart), 693.18 to 21 (incl) (Private Property Limited), 694.26 to 29 (incl) (Glentui Heights Ltd), 696.35 to 38 (incl) (Millbrook Country Club Ltd), 700.4 to 7 (incl) (Ledge Properties Ltd and Edge Properties Ltd), 702.15 to 18 (incl) (Lake Wakatipu Stations Limited), 724.3 (Queenstown Gold Ltd) as shown in **Appendix 2.**

11.12. **Recommendation:** Reject further submission point FS1097.639; accept further submission points FS1217.68, ³¹ FS1219.68, FS1252.68, FS1277.71, FS1316.67, FS1275.241, FS1283.181, FS1139.22 and FS1191.21 as shown in **Appendix 2**.

12. GROUP 4 – SUBMISSION POINTS SEEKING SPECIFIC CHANGES TO THE WORDING OF PROVISIONS

12.1. A number of submission points seek various changes to the wording of objectives and policies. Rather than group these points into themes, I respond to them by objective/provision in turn below, commencing at the start of Chapter 28.

28.1: Purpose

Submission point	Changes sought by submitter
805.66 (Transpower NZ Ltd)	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 <u>acceptable</u> tolerable levels. In instances where the risk is <u>unacceptable</u> intolerable , natural hazards will be required to be avoided.

12.2. Transpower's submission states that 28.1 is supported with amendments, and the reasons accompanying the submission point state the following:

"The introduction to the Natural Hazards Chapter acknowledges that avoidance of natural hazards is preferable, but mitigating effects may be the only feasible option for certain activities such as regionally significant infrastructure. In addition, mitigating effects of natural hazards can be costly and avoiding effects may not always be possible."³²

12.3. The reasons provided do not, in my view, provide any specific explanation for the relief sought. The reason for introducing the term 'tolerable' is set out in paragraphs 6.6 to 6.8. I will consider any further information or reasoning the submitters present at the hearing to further inform the basis of the relief sought. However, at this time I am unable to support the requested relief.

12.4. **Recommendation:** Reject submission point 805.66 as shown in **Appendix 2**.

28.2: Natural Hazard Identification

Submission point	Changes sought by submitter
383.1 (QLDC)	Add the following sentence at the end of the second paragraph: "This is likely to increase with climate change".

³¹ This submission has been withdrawn. The Council received notice of the withdrawal on 19 January 2016.

³² Submission 805, pp 35-36.

12.5. I consider that recognition of the likely effects of climate change is an appropriate inclusion to this section of the Chapter. I also note that the change would be consistent with proposed Strategic Directions Objective 3.2.4.8.1: *Respond positively to Climate Change*.

12.6. **Recommendation:** Accept submission point 383.1 as shown in **Appendix 2**, with the recommended amendments to provision 28.2 shown in **Appendix 1**.

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

Submission point	Changes sought by submitter
433.100 (Queenstown Airport Corporation (QAC)); supported by FS1097.386 and FS1117.187.	The effects of natural hazards on the community and the built environment are <u>appropriately managed</u> . minimised to tolerable levels.
768.25 (Z Energy, BP Oil NZ & Mobil Oil NZ (Oil Companies))	The effects of natural hazards on the community and the built environment are <u>avoided, remedied or mitigated</u> minimised to tolerable levels.

12.7. Both submission points seek an alternative to the use of the term 'minimised'. The Oil Companies submission notes that the plain meaning of 'minimise' means to... "...reduce to the smallest level (of effect) possible, when the policy approach is actually to address effects to tolerable levels (which may or may not be equivalent to minimising the effects depending on the circumstances)."³³

12.8. I agree that use of the word *minimise* would be open to varying interpretations and does not inaccurately articulate the intent of the objective.

12.9. I note in this regard that the decisions version of PRPS Objective 4.1 uses the term *minimise: Risk that natural hazards pose to Otago's communities are minimised*. However, the term is used in the PRPS in the context of 'minimising risk, rather than 'minimising effects'. Also of relevance is that Section 31 RMA includes *the avoidance or mitigation of natural hazards* as a territorial local authority function.

12.10. In my view, substituting the word *minimised* with *avoided or mitigated* would provide greater certainty regarding the intent of the objective. In my view no consequential changes at the policy level would be necessary to implement the amended objective.

³³ Submission 768, p16, para 3.

12.11. I do not consider that it is necessary to include a policy to 'remedy' the effects of natural hazards (as suggested by the Oil Companies), and would question whether such a requirement could be practically achieved.

12.12. The QAC submission³⁴ refers to paragraphs 4.56 and 4.57 of their submission for the reasons for the relief sought. These paragraphs do not however provide any specific rationale for removing the term 'minimised', other than giving a general statement that the notified provisions are too vague and require further clarity and certainty. I consider that the recommended changes to replace *minimised* with *avoided or mitigated* would provide greater certainty and ensure alignment with Council's functions under the RMA.

12.13. QAC is also of the view that terms such as 'intolerable' should be avoided because tolerance is difficult to quantify and depends on circumstances.³⁵

12.14. As discussed at paragraphs 6.6 to 6.8 it is my view that inclusion of the concept of 'tolerability' in the natural hazards policy framework is appropriate, for the very reason that it enables circumstance to be considered in determining the level of risk. Use of the concept of tolerability is consistent with the decision version of the PRPS, in particular Policy 4.1.5, which requires that, in the management of natural hazard risk, particular regard is had to a community's tolerance to risk and the changing nature of risk (amongst other considerations).

12.15. I consider that notified Objective 28.3.1 could be further improved by applying to natural hazard *risk*, rather than *effects*. This further acknowledges that Chapter 28 takes a risk-based approach to natural hazards and increases alignment with the decision version of PRPS Objective 4.1. There is no clear submission seeking this change, but my recommendation is based on achieving consistency with the language used within the chapter and with that of the PRPS.

12.16. **Recommendation:** Accept in part submission point 768.25 and reject submission point 433.100 as shown in **Appendix 2**, with the recommended amendments to notified Objective 28.3.1 shown in **Appendix 1**.

³⁴ Submission 433, p26, row 1.
³⁵ Submission 433, paras 4.56, 4.57.

28.3.1.1 Policy: Ensure assets or infrastructure are constructed and located so as to avoid or mitigate the potential risk of damage to human life, property, infrastructural networks and other parts of the environment

Submission point	Changes sought by submitter
433.101 (QAC); supported by FS1097.387; opposed by FS1117.148.	Ensure assets or infrastructure are constructed and located so as to avoid or mitigate the potential <u>adverse effects of natural hazards, including the risk of</u> risk of damage and to human life, property, infrastructural networks and other parts of the environment.
719.145 (NZ Transport Agency (NZTA)); supported by FS1341.26, FS1342.17 & FS1097.697.	<u>Where practicable, E</u> ensure assets or infrastructure are constructed and located so as to avoid or mitigate the potential risk of damage to human life, property, infrastructural networks and other parts of the environment.
805.67 (Transpower NZ Ltd (Transpower))	Ensure assets or infrastructure are constructed and located so as to avoid or mitigate the potential risk of damage to human life, property, infrastructural networks and other parts of the environment, <u>to the extent practicable, whilst acknowledging the locational, technical and operational requirements of regionally significant infrastructure.</u>
806.194 (QPL)	Either delete "or other parts of the environment", or refine this statement to better define "other parts of the environment".

12.17. The submission points from the NZTA and Transpower seek amendments to Policy 28.3.1.1 that acknowledge that infrastructure is not always able to be located outside of areas affected by natural hazard risk.

12.18. I note that notified Policy 28.3.2.5 recognises that *"some infrastructure will need to be located on land subject to natural hazard risk"* and both the NZTA and Transpower have submitted in support of notified Policy 28.3.2.5³⁶ as shown in **Appendix 2**.

12.19. Transpower provide the following reasons for the specific relief sought in submission point 805.67:

"[...] the objective should acknowledge that effects of natural hazards may not be able to be completely avoided or mitigated. The policy needs to acknowledge the locational, operational, and technical requirements of regionally significant infrastructure such as the National Grid This will also assist with giving effect to the NPSET.

³⁶ As shown in **Appendix 2**, all primary submissions received on notified Policy 28.3.2.5 support the policy without modification. Further submissions FS1097.389 and FS1117.149 oppose the primary submission from QAC (433.103), but only insofar as the QAC submission relates to Plan Change 35. In my view the further submissions are not relevant to natural hazards policy.

All components of the National Grid are designed and constructed to withstand all natural hazard events in accordance with Civil Defence Emergency Management legislation. These include a 1:2,500 year earthquake event as well as flooding and significant snow and storm events that are likely to occur during the design working event of the asset component (minimum 50 years). Durability and resilience are critical criteria that are taken into account.³⁷"

12.20. A definition of Regionally Significant Infrastructure was recommended for inclusion in the PDP during the Hearing of submissions received on PDP Chapter 3: Strategic Direction of 7 – 23 March 2016.³⁸

12.21. Amendments to the definition were subsequently recommended through the Council Reply³⁹ to the Energy and Utilities Chapter 30, considered in Hearing Stream 05, with the following changes recommended (shown underlined):

Regionally Significant Infrastructure means:

- a) Renewable electricity generation facilities, where they supply the National Grid and the local distribution network and are operated by and electricity operator; and*
- b) Electricity transmission infrastructure forming the National Grid; and*
- c) Electricity Distribution Lines identified on the Planning Maps; and*
- d) Telecommunication and radio communication facilities*; and*
- e) Key centralised Council infrastructure, including water reservoirs, and wastewater treatment plants; and*
- f) Roads classified as being of national or regional importance; and*
- g) Queenstown and Wanaka airports.*

** As defined by the Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2008*

12.22. It is my view that, given the importance of regionally significant infrastructure for the District, the relief sought by submission point 805.67 is appropriate for the reasons set out in the s32AA evaluation in **Appendix 4**. I consider that the recommended changes would also result in the acceptance in part of the relief sought by NZTA, as the revisions introduce the words *to the extent practicable* to the policy, as sought by NZTA.

12.23. I consider that the relief sought by QPL to delete "other parts of the environment" is appropriate as this component of the notified policy lacks definition and its application would therefore be uncertain. The notified s32(1)(b) evaluation (see **Appendix 3**)⁴⁰ considers the suite of notified

³⁷ Submission 805, page 36, row 2.

³⁸ Strategic Directions Hearing – Recommended Revised Chapter – Reply 07/04/2016.

³⁹ District Wide Hearing 05 – Recommended Revised Energy and Utilities Chapter 30 – Reply 22/09//2016.

⁴⁰ Page 14.

Policies 28.3.1.1 to 28.3.1.5 applying to natural hazard risk to the *community* and the *built environment* and the s32 analysis does not provide assistance with determining the intended application of *other parts of the environment*.

12.24. In my view the relief sought by QAC is not appropriate as it would not assist with achieving redrafted Objective 28.3.1 or notified Objective 28.3.2, which specifically seek to address risk, rather than *adverse effects* as sought by the submitter.

12.25. **Recommendation:** Accept submission point 805.67 and 806.194; accept in part submission point 719.145; reject submission points 433.101 and FS1097.387 as shown in **Appendix 2**, with the recommended amendments to notified Policy 28.3.1.1 shown in **Appendix 1**.

28.3.1.2 Policy: Restrict the establishment of activities which have the potential to increase natural hazard risk, or may have an impact upon the community and built environment

Submission point	Changes sought by submitter
621.107 (Real Journeys); 669.21 (Burgess); 712.15 (Bobs Cove Developments)	Restrict the establishment of activities which have the potential to increase <u>significant</u> natural hazard risk, or <u>which</u> may have an impact upon the community and built environment.
768.27 (Oil Companies); supported by FS1287.138	Restrict the establishment of activities which have the potential to increase natural hazard risk <u>beyond tolerable levels, including where they or will may have an intolerable</u> impact upon the community and built environment.
806.195 (Queenstown Park Ltd)	Restrict the establishment of activities which have the potential to increase natural hazard risk, or may have <u>an adverse and significant</u> impact upon the community and built environment.

12.26. The relief sought by Real Journeys (621.107) is not accompanied by any reasons⁴¹ relating to the specific changes sought.

12.27. Burgess (669.21) and Bobs Cove Developments (712.15) state the following identical reasons⁴² for the relief sought:

⁴¹ Submission 621.107: p5.

⁴² Submission 669.21: p6, row 2; Submission 712.15: p4.

"There are widespread areas in [sic] identified on Council's hazard database as being subject to at least some natural hazard risk (for example the lowest risk categories of liquefaction risk). It would be inefficient and unjustified for all resource consents in such locations to be required to assess natural hazard risks. A more practical approach is to focus on the avoidance or mitigation of significant natural hazard risk."

12.28. In response to these comments, I note that the Council's Natural Hazards Database sits outside the PDP and is not incorporated by reference. This means that the Database cannot be used as a trigger for resource consent. However, I consider that applications for discretionary (including restricted discretionary that include a relevant matter of discretion) and non-complying activities, in identified hazard areas could assess natural hazard risks in accordance with the policies in Chapter 28. The recommended changes to notified Policy 28.3.3.1 (discussed below in paragraphs 12.69 -70) will further clarify the status of the Database in the context of resource consent decisions. The rationale for keeping the Database external to the PDP is explained in paragraphs 6.3 to 6.5 above.

12.29. It is my view that the policy framework of Chapter 28, which takes a risk-based approach, is appropriate such that it provides sufficient flexibility that the specific nature of a proposed activity can be considered against the type, frequency and likely consequences of natural hazard present, which then determines the level of risk posed.

12.30. The decisions version of PRPS Policy 4.1.6 seeks that natural hazard risk is managed by *"[a]voiding activities that significantly increase risk including the displacement of risk off-site [...]"* (my emphasis added).

12.31. As mentioned above at paragraph 5.20, the use of the term 'avoid' in the PRPS is subject to appeals. However, it is relevant that the above PRPS policy seeks to address *significant* increases in risk. In my view amending Policy 28.3.1.2 of the PDP to apply to activities that significantly increase risk would increase alignment with the PRPS. In addition, confirming that *tolerability* is a factor in determining the significance of risk (as sought by the Oil Companies (768)) in my view would also increase alignment with the PRPS (as discussed in paragraphs 6.6 to 6.8 above). On this basis I support the relief sought in part through the introduction of the amendments to notified Policy 28.3.1.2 shown in **Appendix 1**.

12.32. **Recommendation:** Accept in part the relief sought by 621.107, 669.21, 712.15, 768.27, FS1287.138 and 806.195 as shown in **Appendix 2**.

28.3.1.3 Policy: Recognise that some areas that are already developed are now known to be at risk from natural hazards and minimise such risk as far as possible while acknowledging that landowners may be prepared to accept a level of risk

Submission point	Changes sought by submitter
768.28 (Oil Companies); supported by FS1287.139	Recognise that some areas that are already developed are now known to be at risk from <u>the effects of</u> natural hazards and minimise such risk as far as possible <u>practicable</u> while acknowledging that landowners may be prepared to accept a level of risk.

12.33.I consider that the change sought to replace the word *possible* with *practicable* would generally improve the policy. In my view, the change acknowledges that minimising risk 'as far as possible' may be read to mean minimising risk so that it is negligible, which in my view is not the intent of the policy (or the overarching objective) and would be very difficult to achieve in practice.

12.34.The recommended wording shown in **Appendix 1** further revises the wording to focus the policy on natural hazard risk, rather than the 'effects of natural hazards', as sought by the submitter. I consider this element the recommended revised policy to be a minor non-substantive change to improve the way it is articulated and to increase consistency with the language used throughout Chapter 28.

12.35.**Recommendation:** Accept in part the relief sought by 768.28 and introduce a minor non-substantive amendment as shown in **Appendix 1**.

28.3.1.4 Policy: Allow Public Bodies exercising their statutory powers to carry out natural hazard mitigation activities

Submission point	Changes sought by submitter
806.196 (Queenstown Park Ltd)	Allow Public Bodies <u>the regional and district council</u> exercising their statutory powers to carry out natural hazard mitigation activities, <u>while recognising the need to mitigate potential adverse effects that may result from hazard protection works.</u>

12.36.I consider that the first part of the relief sought is acceptable as the term 'public body' is not defined and is therefore unclear. Replacing the term with 'Regional and District Council' provides greater clarity and certainty.

12.37. I consider that the second part of the relief sought is also an appropriate addition to the policy as it acknowledges that adverse effects can result from hazard protection works and mitigation of those effects may be warranted.

12.38. As an additional minor amendment I also consider that replacement of the word "Allow" with "Enable" would improve the policy, as it more accurately articulates the role of the District Plan, as shown in **Appendix 1**. I consider this change to be a minor non-substantive change.

12.39. **Recommendation:** Accept relief sought by submission point 806.196 as shown in **Appendix 1**.

28.3.2 Objective: 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

Submission point	Changes sought by submitter
621.108 (Real Journeys); 669.22 (Burgess); 712.16 (Bobs Cove Developments)	Development on land subject to <u>a significant</u> natural hazards only occurs where the risks to the community and the built environment are <u>satisfactorily</u> avoided or appropriately managed or mitigated.
806.197 (Queenstown Park Ltd)	Replace Objective 28.3.2 with Objective 4.8.3 of the operative Plan

12.40. With regard to Real Journey's submission point 621.108, I note that the submitters have not provided any reasons for the relief sought. However they have reserved the opportunity to expand on the reasons at the hearing.⁴³ I am not able to accept the relief sought in the absence of specific reasons. The conclusions I reach below regarding the Burgess and Bob's Cove submissions provide my recommended response to the Real Journey's submission at the present time.

12.41. Burgess and Bobs Cove Developments provide the following reasons:

"There are widespread areas in [sic] areas identified on Council's hazard database as being subject to at least some natural hazard risk (for example the lowest risk categories of liquefaction risk). It would be inefficient and unjustified for all resource consents in such locations to be required to assess natural hazard risks. A more practical approach is to focus on the avoidance or mitigation of significant natural hazard risk."⁴⁴

⁴³ Submission 621, page 5.

⁴⁴ Submission 669; page 6, row 3; Submission 712, page 4, row 5.

12.42. The submitters provide no evidence or clarification as to what 'significant natural hazards' means, nor do they provide information regarding a method to give effect to the objective (for example, no maps are provided showing the areas that are subject to 'significant natural hazards'). In the absence of this information I am unable to support the requested relief.

12.43. In my view, limiting Objective 28.3.2 to applying to 'significant natural hazards' would significantly constrain the objective. At the policy level, a framework for the treatment of 'significant risk' is provided (within both the notified and recommended redrafted versions of Policy 28.3.2.1). In my view the objective should apply broadly to all natural hazards, and focussing the objective on significant hazards would result in the objective (and underlying policies) being silent on the treatment of proposals subject to lower levels of natural hazard risk. In my view this approach would not be appropriate and would not give effect to either the notified or decisions version of PRPS Objective 4.1.

12.44. Submission point 806.197 proposes that the objective is replaced with Objective 4.8.3 of the ODP, which directs the following:

"Avoid or mitigate loss of life, damage to assets or infrastructure, or disruption to the community of the District, from natural hazards."

12.45. I consider that notified Objective 28.3.2 improves upon the operative objective as the thrust of notified Objective 28.3.2 is on natural hazard risk. Applying the objective to *the built environment* and *the community* provides a clearer scope for the objective, rather than the reference to *assets or infrastructure, or disruption to the community* in the ODP. In addition, the word *disruption* in Objective 4.8.3 of the ODP is vague and difficult to measure. It is also unclear how one could 'mitigate loss of life'.

12.46. **Recommendation:** Reject submission points 806.197, 621.108, 669.22 & 712.16.

28.3.2.1 Policy: Seek to avoid intolerable natural hazard risk, acknowledging that this will not always be practicable in developed urban areas

Submission point	Changes sought by submitter
433.102 (QAC); supported by FS1097.388 and FS1117.188	<u>Avoid significant</u> Seek to avoid intolerable natural hazard risk, acknowledging that this will not always be practicable in developed urban areas.
768.31 (Oil	Seek to avoid intolerable <u>effects from</u> natural hazard risk, acknowledging that this will not always be practicable in developed urban areas.

Companies); supported by FS1287.141	
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12.47. QAC's submission point 433.102 seeks the avoidance of 'significant' natural hazard risk, with the following reasons provided in Section 4.57 of submission 433:⁴⁵

"The Proposed Plan should avoid the use of terms such as "intolerable", where the level of tolerance is difficult to quantify and dependant on circumstance. The provisions should also clearly identify that they are seeking to manage natural hazards effects."

12.48. I note that the decisions version of PRPS Policy 4.1.6 seeks the avoidance of activities that significantly increase risk. In addition PRPS Policy 4.5.1 seeks the avoidance of land with significant risk from natural hazards. In my view the amendment sought by QAC is appropriate in the context of these higher order policies, which refer to *significant* risk, rather than *intolerable* risk. The amendments sought to replace *tolerable* with *significant* would therefore, in my view, increase alignment with the relevant policies of the decisions version of the PRPS. In my view, tolerance is a factor in determining the significance of risk, as discussed above in paragraph 12.31 and reflected in the recommended changes to Policy 28.3.1.2 shown in **Appendix 1**.

12.49. I consider that the relief sought by the Oil Companies in submission point 768.31 is appropriate as it widens the policy to apply to all developed areas. If the term 'urban' remained in the policy, then it may raise the question as to whether the policy would apply to settlements outside the Urban Growth Boundaries (**UGBs**). I note that the term 'urban' is not defined in Chapter 2: Definitions of the PDP, however the term *Urban Development* is defined. The wording of the definition, as recommended in the Strategic Directions Reply⁴⁶ is as follows:

"Urban Development: Development that by its scale, intensity, visual character, trip generation and/or design and appearance of structures, is of an urban character typically associated with urban areas. Development in particular Special Zones (namely Millbrook and Waterfall Park) is excluded from the definition."

12.50. It is my view that it is appropriate for the policy to apply to all zones where development is contemplated, and as such I consider that deletion of the word 'urban' to widen the policy to apply to 'developed areas' is appropriate in achieving notified Objective 28.3.2.

⁴⁵ Submission 433, p11.

⁴⁶ Web Reference – same as previous

12.51.**Recommendation:** Accept relief sought by submission point 433.102, FS1097.388, FS1117.188; accept in part submission 768.31 and FS1287.141 as shown in **Appendix 2**.

28.3.2.2 Policy: Allow subdivision and development of land subject to natural hazards where the proposed activity does not:

- **Accelerate or worsen the natural hazard and/or its potential impacts.**
- **Expose vulnerable activities to intolerable natural hazard risk.**
- **Create an unacceptable risk to human life.**
- **Increase the natural hazard risk to other properties.**
- **Require additional works and costs that would be borne by the community.**

Submission point	Changes sought by submitter
768.32 (Oil Companies); supported by FS1287.140	Allow Enable subdivision and development of land subject to natural hazards where the proposed activity does not: <ul style="list-style-type: none"> •Accelerate or worsen the <u>risks associated with the</u> natural hazard and/or its potential impacts. •Expose vulnerable activities to intolerable natural hazard risk <u>consequences from natural hazards</u>. •Create an unacceptable risk to human life. • Increase the natural hazard risk to other properties <u>to unacceptable levels</u>. • Require additional works and costs that would be borne by the community.
621.109 (Real Journeys); supported by FS1097.615; 669.23 (Burgess); 712.17 (Bobs Cove Developments)	Allow subdivision and development of land subject to <u>significant</u> natural hazards where the proposed activity <u>it</u> does not: <ul style="list-style-type: none"> • Accelerate or worsen the natural hazard <u>risk</u> and/or its potential impacts. • Expose vulnerable activities to intolerable natural hazard risk. • Create an unacceptable risk to human life. • Increase the natural hazard risk to other properties. • Require additional works and costs that would be borne by the <u>public community</u>."
806.198; supported in part by FS1160.11; 806.199 (Queenstown Park Ltd)	Allow subdivision and development of land subject to natural hazards where the proposed activity does not: <ul style="list-style-type: none"> • Accelerate or worsen the natural hazard and/or its potential impacts <u>to an unacceptable level</u>. • Expose vulnerable activities to intolerable natural hazard risk. • Create an unacceptable risk to human life. • Increase the natural hazard risk to other properties <u>to an intolerable level</u>. • Require additional works and costs that would be borne by the community."

12.52. The submitters request various changes to the policy and I recommend incorporating a number of the changes sought, as shown in **Appendix 1**.

12.53. Regarding the Oil Companies submission point 768.32, I agree that the word "Enable" better reflects the role of the District Plan and I support this change. I also agree that bullet 1 of the

notified policy should be amended to apply to natural hazard risk, rather than 'potential impacts'.

12.54. In a similar vein, I agree with the change to bullet point 5, sought by submitters 621.109, 669.23 and 712.17 as it focusses the policy on natural hazard risk. I also agree that it is appropriate to replace the word "community" with "public".

12.55. However, I do not agree that this policy should only apply to land that is subject to significant natural hazards (refer to the discussion in paragraphs 11.9 - 11.10 and 12.43 above).

12.56. I consider that the bullet point regarding natural hazard risk to other properties is appropriate and should not be deleted. I note that the notified and decisions version of PRPS Policies 4.1.6 and 4.1.10(c) specifically refer to displacement of risk off-site and a number of other PRPS policies⁴⁷ refer generally to natural hazard risk to *people and communities* and do not differentiate between risk within or beyond a site.

12.57. The submission points from the Oil Companies and QAC seeking that the policy be amended to add the qualifiers to bullet points 1 and 4, in my view provide for a pragmatic approach where proposals that increase risk can be contemplated if the increase in risk is low. This is also consistent with the approach in redraft Policy 28.3.1.2, and in my view still gives effect to redraft Objective 28.3.1 and Objective 28.3.2, which provide flexibility for consideration of community tolerance and risk management to be considered.

12.58. **Recommendation:** Accept in part the relief sought by submission points 768.32, FS1287.140, 621.109, FS1097.615, 669.23, 712.17, 806.198, FS1160.11 and 806.199 as shown in **Appendix 2**, with the recommended amendments to notified Policy 28.3.2.2 shown in **Appendix 1**.

28.3.2.3 Policy: Ensure all proposals to subdivide or develop land that is subject to natural hazards provide as assessment covering:

- **The type, frequency and scale of the natural hazard.**
- **The type of activity being undertaken and its vulnerability to natural hazards.**
- **The effects of a natural hazard event on the subject land.**
- **The potential for the activity to exacerbate natural hazard risk both in and off the subject land.**
- **The potential for any structures on the subject land to be relocated.**
- **The design and construction of buildings and structures to mitigate the effects of natural hazards, such as the raising of floor levels.**

⁴⁷ See redrafted version of Policies 4.1.4, 4.1.5, 4.1.7 and 4.1.8. Also of note is that the overarching PRPS Objective 4.1 refers to risk to Otago's *communities*.

- **Site layout and management to avoid the adverse effects of natural hazards, including access and egress during a hazard event.**

Submission point	Changes sought by submitter
806.200 (Queenstown Park Ltd)	Amend to recognise that the level of assessment should be commensurate with the level of potential risk.
768.33 (Oil Companies); supported by FS1287.142	Changes to the final bullet point as follows: [...] • Site layout and management to <u>avoid manage or mitigate</u> the adverse effects of natural hazards to a tolerable level of risk, including <u>with respect to</u> access and egress during a hazard event.
621.110 (Real Journeys); 669.24 (Burgess); 712.18 (Bobs Cove Developments)	Ensure <u>new subdivision or land development</u> all proposals to subdivide or develop land that is <u>at threat from a subject to significant natural hazards risk (identified on the District Plan Maps) is assessed in terms of</u> provide an assessment covering: • The type, frequency and scale of the natural hazard <u>and the effects of a natural hazard event on the subject land</u> . • The <u>type of activity being undertaken and its vulnerability of the activity in relation to the</u> natural hazards. • The effects of a natural hazard event on the subject land. • The potential for the activity to exacerbate <u>the</u> natural hazard risk <u>both in and off the subject land</u> . • The potential for any structures on the subject land to be relocated. • The <u>location</u> , design and construction of buildings and structures to mitigate the effects of natural hazards, <u>such as the raising of floor levels</u> . • Site layout and m <u>Management techniques that</u> to avoid or <u>minimise</u> the adverse effects of natural hazards; <u>including access and egress during a hazard event</u> .

12.59.I recommend incorporation of the relief sought by Queenstown Park Limited (806.200), which will ensure that the level of assessment is commensurate with the level of risk. I consider that this change acknowledges that there is a spectrum of risk, and it would be onerous to require a highly detailed assessment for a proposal that is low risk.

12.60.With respect to submission points 621.110, 669.24 & 712.18, I agree with much of the relief sought (which I discuss below in more detail). However, I do not agree with the approach to the policy applying only to 'significant' natural hazard risk identified on Planning Maps as risk is to be considered on a case-by-case approach. In my view this is consistent with applying the precautionary approach and gives effect to the decision version of PRPS Policy 4.1.8.

12.61.I agree with the relief sought by submission points 621.110, 668.24 & 712.18 in respect of the bullet points 1, 2 and 3, and consider that they articulate these elements of the policy in a more organised and succinct manner.

12.62.With regard to the amendments to bullet point 4, requested by submission points 621.110, 668.24 & 712.18, I consider that risk beyond the subject land should remain a consideration and note that this approach is consistent with the decisions version of PRPS Policy 4.1.6. I

have, however suggested minor non-policy changes to improve the wording of this phrase, as shown in **Appendix 1**.

12.63. With respect to bullet points 6 and 7, I agree with the changes sought by submission point 768.33 and agree in part with submission points 621.110, 668.24 & 712.18. The recommended revised wording is shown in **Appendix 1**. In my view the changes provide greater flexibility for avoidance, management or mitigation, which is consistent with achieving notified Objective 28.3.2

12.64. **Recommendation:** Accept the relief sought by submission points 768.33, FS1287.142 and 806.200; accept in part the relief sought by submission points 621.110, 669.24 & 712.18, as shown in **Appendix 2**, with the recommended amendments to notified Policy 28.3.2.3 shown in **Appendix 1**.

28.3.2.4 Policy: Promote the use of natural features, buffers and appropriate risk management approaches in preference to hard engineering solutions in mitigating natural hazard risk.

Submission point	Changes sought by submitter
768.34 (Oil Companies)	Delete.

12.65. The submitter correctly highlights that hard engineering solutions are often used to mitigate natural hazard risk. It is my view that the policy seeks the consideration of the use of alternatives to hard engineering solutions in the first instance, and that if an alternative solution is not able to be used, then hard engineering can be considered as a tool for mitigating natural hazard risk.

12.66. I note that the decisions version of PRPS Policy 4.1.10 and Policy 11.5.4(d) of the Operative RPS also place parameters around the use of hard protection structures for mitigation of natural hazard.

12.67. Rather than deleting the policy, it is my view that it should be amended to promote alternatives to hard engineering solutions *where practicable*.

12.68. **Recommendation:** Accept in part the relief sought by submission point 768.34 and incorporate the change shown in **Appendix 1**.

28.3.3.1 Policy: Continually develop and refine a natural hazards database in conjunction with the Otago Regional Council, (as a basis for Council decisions on resource consent applications or plan changes and for the assessment of building consents).

Submission point	Changes sought by submitter
768.36 (Oil Companies)	Delete.

12.69. The submitter correctly points out that as the Natural Hazard Database sits outside the PDP, and would be able to be updated without the need for a plan change. In my view the policy should be amended to acknowledge that the database should not itself be a basis for decisions; rather it should be a consideration.

12.70. In practical terms, the information held within the database is used to initially highlight the presence of a natural hazard. The hazard is then able to be interrogated in greater detail through the implementation of recommended redrafted Policy 28.3.2.3, which lists the information to be provided in the hazard assessment for a particular resource consent application. It is the detailed hazards assessment(s) considered through the resource consent process that would form a basis for Council decisions, rather than the database itself. I therefore recommend that notified Policy 28.3.3.1 is amended so that the word "basis" is replaced with "consideration", as shown in **Appendix 1**.

12.71. **Recommendation:** Accept in part the relief sought by submission point 768.36 and incorporate the change shown in **Appendix 1**.

Submission points supporting various provisions of the notified version

12.72. A number of submission points support various proposed objectives and provisions of the notified Chapter 28 with no further comment provided by the submitter. These points are listed in **Appendix 2** and are not discussed in further detail as the submissions do not seek further relief. For instances where I do not recommend changes in the Recommended Revised Version in **Appendix 1**, I recommend these submission points be accepted.

Submission points rejecting various provisions of the notified version

12.73. I recommend that submission points that request deletion of a notified Chapter 28 provision but that do not provide any reasons or rationale for the requested change, and have not been otherwise submitted on, be rejected. These submissions are shown in **Appendix 2**.

13. CONCLUSION

- 13.1. On the basis of the analysis set out within this evidence, I recommend that the changes within the Recommended Revised Chapter in **Appendix 1** be accepted.
- 13.2. The changes will improve the clarity and administration of the PDP; contribute towards achieving the objectives of the PDP and Strategic Direction goals in an effective and efficient manner and give effect to the purpose and principles of the RMA and the functions of the Council and a District Plan in relation to natural hazards.



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15 February 2017