

**BEFORE THE HEARINGS PANEL  
FOR THE QUEENSTOWN LAKES PROPOSED DISTRICT PLAN**

**IN THE MATTER** of the Resource  
Management Act 1991

**AND**

**IN THE MATTER** of Hearing Stream 10  
– Definitions, Natural  
Hazards and Whole of  
Plan

---

**REPLY OF AMY BOWBYES  
ON BEHALF OF QUEENSTOWN LAKES DISTRICT COUNCIL**

**28 NATURAL HAZARDS CHAPTER**

**27 March 2017**

---

---

 **Simpson Grierson**  
Barristers & Solicitors

S J Scott  
Telephone: +64-3-968 4018  
Facsimile: +64-3-379 5023  
Email: sarah.scott@simpsongrierson.com  
PO Box 874  
SOLICITORS  
CHRISTCHURCH 8140

## TABLE OF CONTENTS

1. INTRODUCTION .....	1
2. IWI MANAGEMENT PLANS .....	2
3. POLICY 28.3.2.2 .....	4
4. POLICY 28.3.2.3 .....	5
5. OBJECTIVES 28.3.1 AND 28.3.2: AVOID, MANAGE, MITIGATE .....	5
6. POLICY 28.3.1.1 .....	6
7. POLICY 28.3.1.4 .....	7
8. CONSISTENCY BETWEEN POLICY 28.3.2.3 AND INFORMATION REQUIREMENTS IN 28.5.....	7
9. COUNCIL'S PROCESS FOR UPDATING THE NATURAL HAZARDS DATABASE .....	9
10. HOW 'TOLERANCE' IS DETERMINED FOR NON-NOTIFIED CONSENTS .....	10
11. 'RISK' vs 'ADVERSE EFFECTS OF RISK' .....	10
12. FIRE RISK .....	11
13. CHANGES RECOMMENDED IN SUMMARY OF EVIDENCE AND REVISED CHAPTER TABLED ON 14 MARCH 2017.....	13
14. MINOR CHANGES TO IMPROVE DRAFTING .....	16
15. CONCLUSION.....	17

## 1. INTRODUCTION

- 1.1 My name is Amy Bowbyes. I prepared the section 42A report for the Natural Hazards chapter of the Proposed District Plan (**PDP**), dated 15 February 2017. My qualifications and experience are listed in that s42A report.
- 1.2 I have reviewed the evidence filed by other expert witnesses on behalf of submitters, attended part of the hearing on the 14 March – 17 March 2017 and have been provided with information tabled by submitters at the hearing, including reports of what has taken place at the hearing each day.
- 1.3 This reply evidence covers the following issues:
- (a) Iwi Management Plans;
  - (b) Use of *enable* in Policy 28.3.2.2;
  - (c) Whether Policy 28.3.2.3 should be amended to include a requirement for the effects of climate change to be considered in natural hazard assessments;
  - (d) Use of *manage* and *mitigate* in Objectives 28.3.1 and 28.3.2;
  - (e) Whether Policy 28.3.1.1 is too narrow;
  - (f) Purpose and appropriateness of Policy 28.3.1.4;
  - (g) Consistency between Policy 28.3.2.3 and the information requirements of 28.5;
  - (h) Council's process for updating the natural hazards database;
  - (i) How *tolerance* is determined for non-notified consents;
  - (j) Whether policies should address *risk* or *the adverse effects of risk* (relief sought by the Oil Companies);
  - (k) Whether fire risk should be specifically addressed in Chapter 28 (relief sought by RL Overton);
  - (l) Confirmation of changes recommended in my Summary of Evidence and revised Chapter tabled at the hearing on 14 March 2017; and
  - (m) Minor changes to improve drafting.
- 1.4 Where I am recommending changes to the provisions as a consequence of the Hearing evidence, I have appended these as **Appendix 1 (Recommended Chapter)**. I have attached a section 32AA evaluation in **Appendix 2** for any further significant changes that are being recommended.

1.5 Where I refer to a rule in my evidence I am referring to the Right of Reply version of the chapter (unless otherwise stated).

## 2. IWI MANAGEMENT PLANS

2.1 In paragraph 5.11 of the s42A Report I list the following Iwi Management Plans (**IMPs**) as being relevant to the Natural Hazards chapter:

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

2.2 The Panel has requested that I consider whether there are any other IMPs that are relevant to the Natural Hazards chapter. I confirm that the two IMPs listed above are the only relevant plans that I have identified. I note that these IMPs are those that are identified in Chapter 5 Tangata Whenua<sup>1</sup> of the PDP, which was heard between 7 March and 9 March 2016. The section 32 Report<sup>2</sup> for that chapter also acknowledges that these two plans are those recognised by Queenstown Lakes District Council (**QLDC**).

### MNRMP 2008

2.3 The Panel has also asked for more detail as to the relevance of these IMPs to the Natural Hazards chapter. I have searched both IMPs for references to natural hazards and I confirm that section 3.1.1 of the MNRMP 2008<sup>3</sup> considers climate change impacts, including the impacts on natural hazards. In particular Policy 12 of section 3.1.1 has some relevance:

*12. Support further development and improvement of contingency measures to recognise for increased natural hazard risk as a result of sea level rise and unpredictable weather patterns. Ngai Tahu ki Murihiku will take an active role in the development of contingency measures and education of local communities.*

<sup>1</sup> PDP Chapter 5: Tangata Whenua, provision 5.3.

<sup>2</sup> Section 32 Evaluation Report for the Tangata Whenua Chapter at section 3, page 5.

<sup>3</sup> *The Cry of the People, Te Tangi a Taurira: Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008* at section 3.1.1.

**2.4** I consider that, in particular, Objective 28.3.3 and Policies 28.3.3.1 to 28.3.3.4 of the Natural Hazards chapter take into account Policy 12 of section 3.1.1 of the MNRMP 2008 insofar as Policy 12 relates to flood hazards resulting from unpredictable weather patterns. Furthermore, the changes I recommend to Policy 28.3.2.3 of the Natural Hazards chapter (see section 4 below), to introduce a requirement for the impacts of climate change to be included in hazards assessments, will also appropriately reflect the above policy in my view.

**2.5** Section 3.5.7 of the MNRMP 2008<sup>4</sup> considers the impact of subdivision and development, and the following issues identified have specific relevance to natural hazards:

*The appropriateness of place for subdivision (e.g. what are the community values associated with this place, are there natural hazards that should be considered).*

**2.6** I consider that this issue has been taken into account through the preparation of the suite of objectives and policies within Chapter 28.

#### **KTKO NRMP 2005**

**2.7** Section 5.3.4 of the KTKO NRMP 2005 includes the following in its Wai Maori General Policies<sup>5</sup> which in my view have some relevance to natural hazards:

*43. To discourage activities on riverbanks that have the potential to cause or increase bank erosion.*

*54. To promote landuse that suits the type of land and climatic conditions.*

**2.8** The District is within the Clutha/ Mata-au catchment addressed in section 10 of the KTKO NRMP 2005. The following Wai Maori Policy<sup>6</sup> is relevant in my view:

*10. To promote sustainable landuse within the Clutha/Mata-au Catchment.*

---

<sup>4</sup> *The Cry of the People, Te Tangi a Tauira*. Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008 at section 3.5.7.

<sup>5</sup> *Kāi Tahu ki Otago* Natural Resource Management Plan 2005 at section 5.3.4.

<sup>6</sup> *Kāi Tahu ki Otago* Natural Resource Management Plan 2005 at section 10.2.3.

**2.9** I also consider that these policies have been adequately accounted for through the preparation of the suite of objectives and policies within Chapter 28.

**2.10** I note that the parts of the IMPs that relate to coastal landuse and development are not relevant to this District and therefore have not been considered.

### **3. POLICY 28.3.2.2**

**3.1** The Panel has asked that I consider whether Policy 28.3.2.2 should be amended so that it could not be inferred that the word 'enable' provides absolute approval for subdivision and development of land when the policy requirements are met, even though a proposal may contravene requirements located within other parts of the Plan.

**3.2** Section 28.4 Other Relevant Provisions, draws a plan user's attention to other District wide chapters and provisions. Any proposal to subdivide or develop land would also be required to meet any relevant requirements of these chapters.

**3.3** Further, 1.6.3 of the Introduction Chapter of the PDP in my view provides clarity on this matter as it states that "[d]evelopment may breach several rules across more than one Chapter and all will need to be addressed."

**3.4** For these reasons, it is my view that it is not necessary to amend Policy 28.3.2.2.

**3.5** The Panel also raised the question as to whether the use of 'enable' would result in a gap between Policies 28.3.2.1 and 28.3.2.2. I have considered whether it would be more appropriate to replace 'enable' in Policy 28.3.2.2 with 'not preclude', as suggested by Commissioner Robinson.

**3.6** In my view this suggested change would be appropriate as it would ensure that the requirements of these two policies do not conflict with each other.

**3.7** The change is included in the recommended chapter attached as **Appendix 1**, and is evaluated under s32AA in **Appendix 2**.

#### 4. POLICY 28.3.2.3

- 4.1 The Panel has requested that I consider whether Policy 28.3.2.3 should be amended to include a requirement for the effects of climate change to be considered in natural hazard assessments.
- 4.2 It is my view that the effects of climate change should be a consideration when assessing proposals to subdivide or develop land that is subject to natural hazard risk. The inclusion of a requirement for the effects of climate change to be considered in Policy 28.3.2.3 would be consistent with proposed Strategic Directions Objective 3.2.4.8.1: *Respond positively to Climate Change*.<sup>7</sup> I therefore recommend that Policy 28.3.2.3 is amended to include this requirement.
- 4.3 I consider that the submission of QLDC (383), which seeks acknowledgement of the effects of climate change in the purpose statement (28.2) would provide scope to make this amendment. It is a logical consequent of adding recognition of climate change to the purpose (which I recommended in my s42A<sup>8</sup>) to then reflect this change in the policy.
- 4.4 The change is shown in the recommended chapter attached as **Appendix 1**, and is assessed further in the s32AA evaluation in **Appendix 2**.

#### 5. OBJECTIVES 28.3.1 AND 28.3.2: AVOID, MANAGE, MITIGATE

- 5.1 The Panel interrogated the use of the words avoid, manage and mitigate in Objectives 28.3.1 and 28.3.2.
- 5.2 I concur with Mr Williams' view (provided in his responses to questions from the Panel) that avoidance is absolute whereas management provides flexibility for a range of options to be considered, including mitigation. As highlighted in my s42A Report<sup>9</sup> the use of the word *avoid* in the Proposed Regional Policy Statement (**PRPS**) is subject to appeal and there is currently uncertainty regarding its applicability to the PDP, including whether an activity be avoided, or whether certain effects of an activity be avoided.

---

<sup>7</sup> S42A Report for the Natural Hazards Chapter at paragraphs 12.5

<sup>8</sup> S42A Report for the Natural Hazards Chapter at paragraphs 12.5 to 12.6.

<sup>9</sup> S42A Report for the Natural Hazards Chapter at paragraph 5.20.

**5.3** I remain of the view that mitigation is a form of management and I also remain of the view that the amendments sought by Mr Williams to Objective 28.3.2 are appropriate. To increase consistency with the language used in the other objectives, I consider that it would be appropriate to also amend Objective 28.3.1 to delete *mitigated* and replace with *managed*. I consider that the submissions of Queenstown Airport Corporation (433), Queenstown Park Ltd (FS1097) and Remarkables Park Ltd (FS1117) provide scope to make this change.

**5.4** This amendment is included in the recommended chapter attached as **Appendix 1**, and assessed in the s32AA evaluation in **Appendix 2**.

## **6. POLICY 28.3.1.1**

**6.1** The Panel has asked that I consider whether Policy 28.3.1.1 is too narrow, and has specifically asked that I consider shortening the policy to remove the arm that acknowledges *the locational, technical and operational requirements of regionally significant infrastructure*.

**6.2** In my view the last arm of the policy is appropriate as it acknowledges that further flexibility may be required for regionally significant infrastructure. Policy 28.3.2.5 recognises that some infrastructure will need to be located on land subject to natural hazard risk. Therefore infrastructure that does not fall within the definition of regionally significant infrastructure will also have a degree of flexibility as to its location on land subject to natural hazard risk.

**6.3** The Panel has also asked that I consider whether this policy should be split into two parts and whether all parts of the policy sit comfortably under Objective 28.3.1.

**6.4** In my view Policy 28.3.2.5 would benefit from being split into parts (a) and (b), as shown in **Appendix 1**. This minor and non substantive change would in my view improve the quality of drafting.

**6.5** Regarding the location of the policy beneath Objective 28.3.1, in my view this is appropriate as the matters addressed in the policy (risk to human life, property and infrastructure) are relevant to the objective.

**7. POLICY 28.3.1.4**

**7.1** As requested by the Panel I have further considered the intent of Policy 28.3.1.4. In my view the intent of the policy is to address planned, rather than emergency mitigation works. This acknowledges that resource consent may be required for mitigation works undertaken by the Regional and District Councils. In my view it is appropriate to acknowledge that adverse effects can result from mitigation works and it is appropriate that those adverse effects are mitigated.

**7.2** No further amendments to the policy are recommended.

**8. CONSISTENCY BETWEEN POLICY 28.3.2.3 AND INFORMATION REQUIREMENTS IN 28.5**

**8.1** The Panel has requested that I consider whether there is internal consistency between Policy 28.3.2.3 and the information requirements of 28.5.

**8.2** Policy 28.3.2.3 requires all proposals to subdivide or develop land that are subject to natural hazard risk to provide a natural hazards assessment, whereas 28.5 requires an assessment for development proposals affected by, or potentially affected by natural hazards identified in the natural hazard database.

**8.3** As the natural hazard database is not incorporated into the PDP by reference it cannot be used as a trigger for resource consent. I address this point in paragraphs 12.69 to 12.71 of the s42A Report, where I recommend amending Policy 28.3.3.1 to replace the word 'basis' with 'consideration' (thereby accepting in part the relief sought by the Oil Companies (768)).

**8.4** It is also of relevance that for subdivision, section 106 of the Resource Management Act 1991 (**RMA**) may also apply, irrespective of the activity status under the PDP. Section 106 provides for situations where a council may refuse to grant a subdivision consent or may grant subject to conditions.

**8.5** In practice, at the 'rule' level in the respective chapters of the PDP that contain rules, a hazards assessment can be required when:

- (a) there is a specific rule that requires a hazards assessment; and/or
- (b) natural hazards are listed as a matter of restricted discretion or control, or the activity status is discretionary or non-complying.

**8.6** There is therefore, on the face of it, a disconnect between Policy 28.3.2.3 (which applies to *all proposals to subdivide or develop land that is subject to natural hazard risk*) and what occurs at the 'rule' level in the PDP. Removing the word "all" from Policy 28.3.2.3 may remove this disconnect, however in my view the relief sought by submissions on this policy or the wider natural hazards does not provide scope to make this change.

**8.7** After further consideration, I believe that a consequential amendment is required to 28.5 to make it clearer that the database is not a trigger for the need to provide a natural hazards assessment. This recommended change is shown in **Appendix 1**, and removes any inference that the natural hazard database is a trigger for a requirement for an assessment of natural hazards effects.

**8.8** I consider that the Oil Companies submission (768.36) provides scope for this recommended change.

**8.9** As discussed during the hearing, it could be argued that all parts of the District are subject to some sort of natural hazard risk. Therefore, where provided for by the rules of the PDP, Policy 28.3.2.3 would result in a hazards assessment being required prior to any development occurring.

**8.10** I note however that the policy allows that the assessment is "commensurate with the level of natural hazard risk". In practice this means that everyday development proposals would not have to provide assessment information about the matters set out in Policy 28.3.2.3, but where significant development proposals that potentially contemplate a high level of natural hazard risk are proposed, a comprehensive natural hazard assessment will be necessary. I note that, as highlighted in the final paragraph of 28.2 (and in Policy 28.3.3.1 regarding the use of the natural hazards database), the Building Act 2004 also provides the opportunity for Council to consider natural hazard risk in the context of a specific development proposal submitted through the building consent process. I consider that in a circumstance where a Council does not

have comprehensive, rigorously vetted natural hazard information it is very difficult to prescribe within rules where natural hazard assessment is in every circumstance necessary and unnecessary. I therefore favour retaining the proposed approach which allows a degree of discretion and judgement to be applied.

## **9. COUNCIL'S PROCESS FOR UPDATING THE NATURAL HAZARDS DATABASE**

- 9.1** The Panel has asked that I provide information regarding the process for including natural hazards information in the natural hazards database.
- 9.2** The database is managed by Council's Geographic Information System (**GIS**) team. I have been advised by Ryan Clements (Council's Chief Information Officer) that there is no process currently in place that provides a formal avenue for the public to influence the information uploaded to the database. The database is comprised of hazard reports and geographic data, which is commissioned either by the Council or Otago Regional Council (**ORC**). The hazard reports use different data that is captured at different scales (from regional to site-specific). The database is able to be accessed both via the internal GIS viewer (for use by Council staff) and the external GIS viewer (available to the public via the Council website).
- 9.3** Commissioner Nugent has asked that I confirm whether reports that are received by Council through the resource consent process (such as geotechnical reports) are included in the natural hazards database. Mr Clements has confirmed that these reports are not put in the natural hazard database. Mr Clements advises that these reports are captured in a separate GIS layer that is used by Council staff as part of the LIM process so that a list of the relevant hazard report titles are able to be listed on LIM reports.
- 9.4** As the database is not a trigger for resource consent, and is a consideration for decision-making in respect of land subject to natural hazard risk, rather than a basis for decisions, I consider that the use of the database through the Natural Hazards chapter as a resource that sits outside the PDP is appropriate. The information requirements of 28.5 highlight the fact that the database contains information that has been developed at different scales and advises Plan users that further detailed analysis may be required.

## **10. HOW 'TOLERANCE' IS DETERMINED FOR NON-NOTIFIED CONSENTS**

- 10.1** The Panel asked Mr Henderson (who appeared for ORC and confirmed that he was providing ORC's evidence, rather than Mr Hanley) how 'tolerance' would be determined through the resource consent process when a resource consent is issued under delegated authority.
- 10.2** In my view in this scenario the person who is tasked with issuing the consent under delegated authority is representing the community's views in the Council's capacity as a decision-maker under the RMA. For example the flooding risk in the Queenstown Town Centre is well known and there is high level of tolerance amongst the community for the inconvenience and risk to property that this risk entails. The matter is well known and fairly confined and the fact that it is tolerated is in my view a relevant factor in seeking to promote good resource management in this area.
- 10.3** In determining whether a tolerable level of risk would be achieved, the decision-maker would also take into account the findings of the natural hazards assessment required by Policy 28.3.2.3.

## **11. 'RISK' vs 'ADVERSE EFFECTS OF RISK'**

- 11.1** The evidence tabled by Mr Laurenson for the Oil Companies (768, FS182) seeks that various policies are amended to address the 'adverse effects of risk', rather than 'risk' itself. Mr Laurenson did not appear at the hearing.
- 11.2** In Mr Laurenson's view<sup>10</sup> the policy focus should be on managing effects or exposure to risk, rather than seeking to reduce the risk or likelihood of natural hazards.
- 11.3** In my view the approach put forward by Mr Laurenson is not consistent with the PRPS, which focusses on risk, rather than adverse effects of risk and as such the amendment sought would decrease consistency with the PRPS.
- 11.4** I am satisfied that it is appropriate that the policy framework within Chapter 28 addresses 'risk'. Furthermore, in my view the policy suite does not place an

---

<sup>10</sup> Mr Laurenson's evidence at section 3, paragraph 1.

expectation that the likelihood of a natural hazard event occurring is reduced. In my view it is inherent that managing risk includes management of any adverse effects caused by risk.

**11.5** For the reasons set out above, no changes are recommended.

## **12. FIRE RISK**

**12.1** Mr Overton (465) appeared on 17 March 2017 and is of the view that an objective and assessment matters should be introduced to Chapter 28 that specifically address fire risk as a consideration for the grant of consents for subdivision and development. I understand that, in particular, Mr Overton is concerned about the fire risk resulting from subdivision and development on Mt Iron, Wanaka.

**12.2** I note that fire risk is acknowledged as a natural hazard in the Natural Hazards chapter,<sup>11</sup> whereas it was not acknowledged in the Operative District Plan (ODP).

**12.3** As discussed in my s42A Report at paragraph 10.14 the natural hazards database will need to be updated to include information regarding fire risk, and I understand the database does not currently hold this information. This would not preclude a natural hazards assessment from being required pursuant to Policy 28.3.2.3 however, as the database is not a trigger for requiring a natural hazard assessment, it is a 'consideration' (Policy 28.3.3.1) rather than a basis for decisions on resource consents and plan changes.

**12.4** In my view it is appropriate that Chapter 28 applies generally to natural hazards, and the assessment required by Policy 28.3.2.3 is applicable to fire risk.

**12.5** In paragraph 10.17 of the s42A Report, I note that changes to rural provisions were considered in Hearing Stream 02 that balance the need for vegetation retention versus managing fire risk. The relevant provisions of the Rural Residential and Rural Lifestyle Zone (taken from the reply version of Chapter 22 of the PDP) are as follows:

---

<sup>11</sup> Natural Hazards chapter 28 section 28.2.

- (a) Policy 22.2.1.7: *Have regard to fire risk from vegetation and the potential risk to people and buildings, when assessing subdivision, development and any landscaping.*
- (b) Policy 22.2.1.8: *Provide adequate firefighting water and fire service access to ensure an efficient and effective emergency response.*
- (c) Objective 22.2.3: *New development adequately manages natural hazard risk.*
- (d) Policy 22.2.3.1: *Parts of the Rural Residential and Rural Lifestyle zones have been, and might be identified in the future as susceptible to natural hazards and some areas may not be appropriate for residential activity if the natural hazard risk cannot be adequately managed.*
- (e) Rule 22.4.3 Rural Lifestyle Zone: Building Platforms as a discretionary activity
- (f) Rule 21.5.X<sup>12</sup> Fire fighting water and access: Rural Residential Zone
- (g) Rule 22.5.19 Indigenous vegetation (including consideration of the risk of fire).

**12.6** Also of relevance are the following provisions of the reply version of the subdivision chapter:

- (a) Policy 27.2.5.7: *Ensure water supplies are of a sufficient capacity, including firefighting requirements, and of a potable standard, for the anticipated land uses on each lot or development.*
- (b) Policy 27.3.6.1: *Particular regard shall be had to the avoidance or mitigation of natural hazards identified on the Council's hazard register associated with the location of a building platform and future anticipated land uses within the building platform.*

---

<sup>12</sup> I understand that the correct reference for this rule is 22.5.x, however it is shown as 21.5.x in the recommended Chapter 22 attached as Appendix 1 to Mr Craig Barr's Right of Reply for Chapter 22 – Rural Residential and Rural Lifestyle, dated 3 June 2016.

- (c) Rule 27.5.6 Restricted Discretionary Activity status for all urban subdivision activities, which includes the following matter of discretion: *On site measures to address the risk of natural and other hazards on land within the subdivision.*
- (d) Rule 27.7.1 Controlled Activity status for subdivision undertaken in accordance with a structure plan, spatial layout plan, or concept development plan that is identified in the District Plan, which includes the following matter of control: *Natural and other hazards.*

**12.7** In my view these provisions are appropriate, and no further changes are necessary to Chapter 28 to address this matter.

### **13. CHANGES RECOMMENDED IN SUMMARY OF EVIDENCE AND REVISED CHAPTER TABLED ON 14 MARCH 2017**

**13.1** In my Summary of Evidence<sup>13</sup> (**Summary**) presented to the Panel at the hearing on 14 March 2017 I addressed the evidence provided by Mr Williams<sup>14</sup> and recommended that the relief sought for amendments to Objective 28.3.2 and Policy 28.3.1.1 should be accepted. The recommended changes to Chapter 28 were shown in a revised version of the chapter that was tabled at the hearing.

**13.2** I remain of the view that the changes suggested by Mr Williams are appropriate for the reasons outlined in my Summary. For completeness, the recommended changes and reasons outlined in my Summary are as follows:

- 6(a) *that the words "or mitigated" are removed from Objective 28.3.2 to avoid confusion as to whether 'risk management' and 'risk mitigation' are mutually exclusive concepts;<sup>15</sup> and*
- 6(b) *that the words "of damage" in Policy 28.3.1.1 are moved to sit after the words "human life".<sup>16</sup> In my view this is a minor non-substantive change that would improve the wording of the redrafted policy.*

<sup>13</sup> Amy Bowbyes Summary of Evidence, 13 March 2017: Chapter 28 Natural Hazards – Hearing Stream 10, at paragraph 6.

<sup>14</sup> Mr Williams for Queenstown Park Limited (806, FS1097) and Remarkables Park Limited (FS 1117).

<sup>15</sup> See Mr William's paragraph 6.4.

<sup>16</sup> See Mr William's paragraph 6.4.

**13.3** At paragraph 7 of my Summary, I addressed the evidence provided by Mr Hanley for ORC (adopted by Mr Henderson at the hearing).<sup>17</sup> I remain of the view that the changes recommended in paragraphs 7(b), 7(c), 7(d), 7(e), and 7(h) of my Summary are appropriate. These are as follows:

7(b) **Policy 28.3.1.3:** *I agree that it would be appropriate to replace the word "landowner" with the word "community" and I agree that this change would reinforce that 'tolerance' is assessed at a community level rather than at an individual level.*

7(c) **Policy 28.3.2.1:** *I support amending the policy to state "avoid significantly increasing risk" as this change would increase consistency with the PRPS and would still enable flexibility for redevelopment to occur in areas where natural hazard risk is present. If my recommendation to include the word increasing in the policy is accepted then I also recommend accepting deletion of the words "acknowledging that this will not always be practicable in developed areas," given the shift in focus of the policy from "avoiding significant risk" to "avoiding significantly increasing risk." I consider that these changes remain consistent with the approach outlined in paragraph 9.15 of the s42A Report, and remain consistent with the approach supported by Ms Black.*

7(d) **Policy 28.3.2.2:** *I recommend accepting replacing the word "unacceptable" with "intolerable". I accept that using the word intolerable will increase consistency of the terms used in Chapter 28 and increase alignment with the PRPS. I also accept the change sought to amend the final bullet point of the policy to include the words "remedial works". I consider this to be a minor change to increase alignment with the language used in the PRPS.*

7(e) **Policy 28.3.2.3:** *I recommend accepting the reinstatement of the word "avoid" in the final bullet point of the policy. I agree that if risk cannot be managed to a tolerable level then avoidance should occur. This is consistent with part of the relief sought by other submitters.<sup>18</sup> Furthermore, consistent with the relief sought by Mr Williams in respect of Objective 28.3.2 (in paragraph 6(a) above), I consider that*

---

<sup>17</sup> Mr Hanley for ORC (798, FS1160).

<sup>18</sup> Real Journeys Limited (621.110), Burgess (669.24) and Bobs Cove Developments (712.18).

*it would also be appropriate to amend the policy to remove the words "or mitigate".*

*7(h) **Policy 28.3.3.4:** I recommend accepting replacing the word "unacceptable" with "intolerable". Consistent with my recommendation regarding the relief sought for Policy 28.3.2.2 (in paragraph 7(d) above), I accept that using the word intolerable will increase consistency of the terms used in Chapter 28 and increase alignment with the PRPS.*

- 13.4** Regarding the relief sought by Mr Henderson relating to the use of 'minimised' in Objective 28.3.1 (paragraph 7(a) of my Summary), I remain of the view that it is not appropriate to amend Objective 28.3.1 as the use of 'minimise' in the PRPS is subject to appeals and there is uncertainty as to whether it will remain in the PRPS.
- 13.5** Mr Henderson sought that Policy 28.3.2.4 be amended to more closely reflect PRPS Policy 4.1.10 (paragraph 7(f) of the Summary). I consider that while this change has merit, there does not appear to be any scope to make it. Neither ORC's submission or further submission relates to hard engineering solutions generally, or to Policy 28.3.2.4. The Oil Companies<sup>19</sup> were the only submitter to submit directly on Policy 28.3.2.4, seeking that it be deleted in its entirety. In my view the relief sought by the Oil Companies would have the opposite effect to the relief sought by ORC.
- 13.6** Mr Hanley also seeks that Objective 28.3.3 is amended to give effect to PRPS Policy 4.1.2 which requires that assessment of risk likelihood must cover no less than a 100 year period. I note that this matter was not addressed in any further detail by Mr Henderson when he adopted Mr Hanley's evidence for ORC on 15 March 2017.
- 13.7** I have further considered the relief sought and consider that it would be appropriate to amend Policy 28.3.2.3 in the manner sought. The change would increase alignment with the likely provisions of the PRPS notwithstanding the appeals to the decisions version and regardless, would in my view place appropriate parameters around the detail of assessment required. I therefore recommend that this element of relief is accepted in part,

---

<sup>19</sup> Submitter 768 Z Energy Limited, BP Oil NZ Limited and Mobil Oil NZ Limited.

as I recommend that the amendment is made to Policy 28.3.2.3, rather than Objective 28.3.3 as sought by Mr Hanley.

**13.8** The changes that I recommend are shown in the recommended chapter attached as **Appendix 1**, and are assessed in the s32AA evaluation in **Appendix 2**.

#### **14. MINOR CHANGES TO IMPROVE DRAFTING**

**14.1** The Panel has asked that I consider making a minor amendment to 28.2 (Natural Hazard Identification) so that the recommended text says... "*... This is likely to increase ~~with~~ as a result of climate change.*"

**14.2** I agree that this change would improve the quality of drafting. The change in my view remains consistent with the relief sought by QLDC (383.1) as discussed in my s42A Report <sup>20</sup>. The change is included in the recommended chapter attached as **Appendix 1**.

**14.3** The Panel has also asked that I consider whether policies should be amended to ensure that they always refer to natural hazards (so that it could not be interpreted that they are addressing other types of risk).

**14.4** I agree that the policies should be drafted so their application is clear and recommend the following changes shown in full in **Appendix 1**, and that these are all matters of clarity only:

- (a) Policy 28.3.1.1 is amended to refer to... "...risk from natural hazards to human life...";
- (b) Policy 28.3.1.1 is amended to refer to... "...the potential risk of damage to property and infrastructural networks from natural hazards...";
- (c) Policy 28.3.3.2 is amended to refer to.. "...access to the most up-to-date natural hazard information..."; and

---

<sup>20</sup> S42A Report for the Natural Hazards Chapter at paragraphs 12.5 to 12.6.

- (d) Policy 28.3.3.4 is amended to... "Monitor natural hazard trends and changes in natural hazard risk...".

## 15. CONCLUSION

- 15.1 Overall, with the incorporation of the above-mentioned changes, I consider that the recommended chapter as set out in **Appendix 1** is the most appropriate way to meet the purpose of the RMA, to address the relevant matters to be considered and to perform the functions of a territorial authority.



**Amy Bowbyes**  
**27 March 2017**

**APPENDIX 1**  
**REVISED NATURAL HAZARDS CHAPTER 28**

# NATURAL HAZARDS 28

Key:

Recommend changes to notified chapter are shown in red underlined text for additions and ~~red-strike~~ through text for deletions. Appendix 1 Right of Reply, dated 27 March 2017.

Recommend changes to notified chapter are shown in green underlined text for additions and ~~green-strike~~ through text for deletions. Revised chapter showing amendments recommended by Ms Amy Bowbyes, s 42A report author, at the hearing of Chapter 28 Natural Hazards on 14 March 2017.

Recommend changes to notified chapter are shown in underlined text for additions and ~~strike through text~~ for deletions. Appendix 1 to s42A report, dated 15 February 2017.

## 28 Natural Hazards

### 28.1 Purpose

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

### 28.2 Natural Hazard Identification

Natural Hazards that exist in the District include:

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

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

Comment [AB1]: 383.1

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

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

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

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

# NATURAL HAZARDS 28

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

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

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

## 28.3 Objectives and Policies

**28.3.1 Objective – ~~The effects of~~ The risk posed by natural hazards on to the community and the built environment are minimised is avoided or mitigated managed to a tolerable levels.**

**Comment [SG2]:** Consistency within policies in chapter

**Comment [SG3]:** 768.25

**Comment [AB4]:** 433, FS1097, FS1117

**Comment [AB5]:** 768.25

### Policies

**28.3.1.1** Ensure assets or infrastructure are constructed and located so as to avoid or mitigate:

**a.** ~~the potential risk from natural hazards of damage to human life;~~ and

**Comment [AB6]:** Minor non-substantive change to improve wording

**b.** ~~the potential risk of damage to property and infrastructural networks from natural hazards and other parts of the environment to the extent practicable, whilst acknowledging the locational, technical and operational requirements of regionally significant infrastructure.~~

**Comment [AB7]:** 806, FS1097, FS1117

**Comment [AB8]:** Minor non-substantive change to improve wording

**28.3.1.2** Restrict the establishment of activities which ~~have the potential to significantly increase natural hazard risk, including where they will have an intolerable or may have an impact upon the community and built environment.~~

**Comment [SG9]:** 806.194

**Comment [SG10]:** 805.67

**Comment [AB11]:** 805.67, 806.194, 719.145.

**28.3.1.3** Recognise that some areas that are already developed are now known to ~~be at risk from subject to natural hazards risk~~ and minimise such risk as far as possible practicable while acknowledging that ~~landowners the community~~ may be prepared to accept a level of risk.

**Comment [AB12]:** Minor non-substantive change to split policy out into two parts to improve quality of drafting

**28.3.1.4** ~~Allow Enable Public Bodies~~ the Regional and District Council exercising their statutory powers to carry out natural hazard mitigation activities, while recognising the need to ~~mitigate potential adverse effects that may result from natural hazard mitigation works.~~

**Comment [AB13]:** 621.107, 669.21, 712.15, 768.27 and 806.195

**Comment [AB14]:** Additional minor non-substantive change to improve wording.

**28.3.1.5** Where practicable, reduce the risk posed by natural hazards to the existing built environment and the community.

**Comment [AB15]:** 768.28

**Comment [AB16]:** 798

**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.**

**Comment [AB17]:** Minor non-substantive change to improve wording

**Comment [AB18]:** 806.196

**Comment [AB19]:** 806, FS1097, FS1117

### Policies

**28.3.2.1** ~~Seek to avoid intolerable~~ Avoid significantly increasing natural hazard risk, ~~acknowledging that this will not always be practicable in developed urban areas.~~

**Comment [AB20]:** 798

**28.3.2.2** ~~Allow~~ **Enable** ~~Not preclude~~ subdivision and development of land subject to natural hazards where the proposed activity does not:

**Comment [AB21]:** 433.102, 768.31.

**Comment [AB22]:** 768.32.

- Accelerate or worsen the natural hazard ~~and/or its potential impacts~~ risk to an ~~unacceptable intolerable~~ level.

**Comment [AB23]:** Minor non-substantive change to improve wording

**Comment [AB24]:** 798

# NATURAL HAZARDS 28

- Expose vulnerable activities to intolerable natural hazard risk.
  - Create an unacceptable-intolerable risk to human life. Comment [AB25]: 798
  - Increase the natural hazard risk to other properties to an unacceptable intolerable level. Comment [AB26]: 798
  - Require additional works and costs, including remedial works, that would be borne by the community public. Comment [AB27]: 798
- 28.3.2.3 Ensure all proposals to subdivide or develop land that is subject to natural hazards risk provide an assessment covering that meets the following information requirements, ensuring that the level of detail of the assessment is commensurate with the level of natural hazard risk: Comment [AB28]: 768.32, 621.109, 669.23 & 712.17, 806.198, 806.199
- The likelihood of the natural hazard event occurring over no less than a 100 year period. Comment [AB29]: 621.110, 668.24 & 712.18
  - The type, frequency and scale of the natural hazard and the effects of a natural hazard on the subject land. Comment [AB30]: 806.200
  - The effects of climate change on the frequency and scale of the natural hazard. Comment [AB31]: 798
  - The vulnerability of the activity in relation to the natural hazards. Comment [AB32]: 621.110, 668.24 & 712.18
  - The effects of a natural hazard event on the subject land. Comment [AB33]: 383
  - The potential for the activity to exacerbate the natural hazard risk both within and off beyond the subject land. Comment [AB34]: 621.110, 668.24 & 712.18
  - The potential for any structures on the subject land to be relocated. Comment [AB35]: Minor non-substantive change to improve wording
  - The location, design and construction of buildings and structures to mitigate the effects of natural hazards, such as the raising of floor levels. Comment [AB36]: 621.110, 668.24 & 712.18
  - Site layout and management techniques to avoid that avoid or manage or mitigate the adverse effects of natural hazards risk to a tolerable level, including with respect to access ingress and egress during a natural hazard event. Comment [AB37]: 798  
Comment [AB38]: 806, FS1097, FS1117
- 28.3.2.4 Promote Where practicable, promote the use of natural features, buffers and appropriate risk management approaches in preference to hard engineering solutions in mitigating natural hazard risk. Comment [AB39]: 621.110, 668.24, 712.18 & 768.33. Additional minor non-substantive changes to improve wording
- 28.3.2.5 Recognise that some infrastructure will need to be located on land subject to natural hazard risk. Comment [AB40]: 768.34
- 28.3.3 **Objective - The community's awareness and understanding of the natural hazard risk in the District is continually enhanced.**
- Policies**
- 28.3.3.1 Continually develop and refine a natural hazards database in conjunction with the Otago Regional Council, (as a basis consideration for Council decisions on resource consent applications or plan changes and for the assessment of building consents). Comment [AB41]: 768.36
- 28.3.3.2 Ensure the community has access to the most up-to-date natural hazard information available. Comment [AB42]: Minor non-substantive change to improve wording
- 28.3.3.3 Increase the community awareness of the potential risk of natural hazards, and the necessary emergency responses to natural hazard events.
- 28.3.3.4 Monitor natural hazard trends and changes in risk and consider action should natural hazard risks become unacceptable intolerable. Comment [AB43]: Minor non-substantive change to improve wording  
Comment [AB44]: 798

# NATURAL HAZARDS 28

## 28.4 Other Relevant Provisions

### 28.4.1 District Wide Rules

**Comment [AB45]:** Minor, non-substantive changes to increase consistency with other PDP Chapters.

Attention is drawn to the following District Wide chapters. All provisions referred to are within Stage 1 of the Proposed District Plan, unless marked as Operative District Plan (ODP).

1 Introduction	2 Definitions	3 Strategic Direction
4 Urban Development	5 Tangata Whenua	6 Landscapes
24 Signs (18 ODP Operative)	25 Earthworks (22 ODP Operative)	26 Historic Heritage
27 Subdivision	29 Transport (14 ODP Operative)	30 Energy and Utilities and Renewable Energy
31 Hazardous Substances (16 ODP Operative)	32 Protected Trees	33 Indigenous Vegetation
34 Wilding Exotic Trees	35 Temporary Activities and Relocated Buildings	36 Noise
37 Designations	Planning Maps	

## 28.5 Information Requirements

~~Development proposals affected by, or potentially affected by, natural hazards as identified in Council's natural hazards database will require an accompanying assessment of natural hazards effects commensurate to the level of risk posed by the natural hazard. Council holds Council's natural hazards database identifies land that is affected by, or potentially affected by, natural hazards. The database contains~~ natural hazard information that has been developed at different scales and this should be taken into account when assessing potential natural hazard risk. It is highly likely that for those hazards that have been identified at a 'district wide' level, further detailed analysis will be required.

**Comment [AB46]:** 768.36

**APPENDIX 2**  
**SECTION 32AA EVALUATION**

## Appendix 2

### Section 32AA evaluation

Recommend changes to notified chapter are shown in red underlined text for additions and ~~red-strike~~ through text for deletions. Appendix 1 Right of Reply, dated 27 March 2017.

Recommend changes to notified chapter are shown in green underlined text for additions and ~~green strike~~ through text for deletions. Revised chapter showing amendments recommended by Ms Amy Bowbyes, s 42A report author, at the hearing of Chapter 28 Natural Hazards on 14 March 2017.

Recommend changes to notified chapter are shown in underlined text for additions and ~~strike through text~~ for deletions. Appendix 1 to s42A report, dated 15 February 2017.

#### Recommended amendments to Objective 28.3.1 and 28.3.2

**28.3.1**      **Objective – ~~The effects of~~ The risk posed by natural hazards on to the community and the built environment are minimised ~~is avoided or~~ mitigated managed to a tolerable levels.**

**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~~.**

#### Appropriateness (s32(1)(a))

The changes are more appropriate in achieving the purpose of the RMA than the notified and s42A version because:

- The recommended changes ensure consistency in the language used in the two objectives. Mitigation is a form of management, and use of the word mitigation in the objectives incorrectly suggests that mitigation and management are mutually exclusive concepts.

It is therefore considered to be more appropriate in achieving the purpose of the RMA than the notified version.

**Recommended amendments to Policy 28.3.1.3**

**Policy 28.3.1.3**

Recognise that some areas that are already developed are now known to be ~~at risk from~~ subject to natural hazards risk and minimise such risk as far as ~~possible~~ practicable while acknowledging that ~~landowners~~ the community may be prepared to accept a level of risk.

Costs	Benefits	Effectiveness & Efficiency
<ul style="list-style-type: none"> <li>The recommended change will mean that tolerance is not determined by an individual landowner, which may result in a cost to landowners that have a higher tolerance to natural hazard risk than that of the community.</li> </ul>	<ul style="list-style-type: none"> <li>Reinforces that tolerance to natural hazard risk is determined at the community level, rather than by individuals. This means that natural hazard tolerance is determined collectively, rather than being unduly influenced by the interests of an individual.</li> <li>Furthermore, the recommended change gives effect to the decisions version of PRPS Policy 4.1.5(c), which states that particular regard will be had to "<i>the community's tolerance of [...] 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 [...].</i>"</li> <li>The policy still acknowledges that tolerance is a factor in determining whether natural hazard risk will be at an appropriate level.</li> </ul>	<ul style="list-style-type: none"> <li>The recommended change increases the effectiveness and efficiency of the policy as it clarifies that a community's tolerance of risk (rather than an individual's tolerance) is a relevant factor, particularly when considering natural hazard risk affecting areas of existing development.</li> </ul>

**Recommended amendments to Policy 28.3.2.1**

**Policy 28.3.2.1**

~~Seek to avoid intolerable~~ Avoid significantly increasing natural hazard risk, ~~acknowledging that this will not always be practicable in developed urban areas.~~

Costs	Benefits	Effectiveness & Efficiency
<ul style="list-style-type: none"> <li>The recommended change removes the specific acknowledgement of existing developed areas in the notified version, however the recommended change still enables the flexibility for redevelopment within these areas, provided that natural hazard risk is not significantly increased.</li> </ul>	<ul style="list-style-type: none"> <li>The recommended amendment targets the policy to activities that <i>significantly increase</i> natural hazard risk and increases alignment with the decisions version of PRPS Policy 4.1.6 (a)(noting, however that the avoidance approach advocated by that policy is subject to appeals and therefore remains uncertain at this stage).</li> </ul>	<ul style="list-style-type: none"> <li>The recommended changes to the policy are more effective and efficient as they increase the policy's alignment with the decisions version of the PRPS and with other policies within Chapter 28.</li> </ul>

**Recommended amendments to Policy 28.3.2.2 and 28.3.3.4**

**Policy 28.3.2.2**

Allow ~~Enable~~ ~~Not preclude~~ 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~~ risk to an unacceptable

intolerable level.

- Expose vulnerable activities to intolerable natural hazard risk.
- Create an unacceptable-intolerable risk to human life.
- Increase the natural hazard risk to other properties to an unacceptable intolerable level.
- Require additional works and costs, including remedial works, that would be borne by the community public.

**Policy 28.3.3.4**

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

Costs	Benefits	Effectiveness & Efficiency
<ul style="list-style-type: none"> <li>• Inclusion of 'remedial works' to the final bullet point of Policy 28.3.2.2 adds to the requirements of the notified version regarding restricting additional works and costs borne by the public.</li> </ul>	<ul style="list-style-type: none"> <li>• The recommended amendment to replace the word 'unacceptable' with 'intolerable' gives effect to the decisions version of PRPS Policy 4.1.5(c), which states that particular regard will be had to "<i>the community's tolerance of [...] 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 [...].</i>"</li> <li>• Use of the concept of 'tolerability' further aligns the policy with the language used elsewhere in the chapter, providing a consistent approach.</li> <li>• Inclusion of 'remedial works' in the final bulletpoint of</li> </ul>	<ul style="list-style-type: none"> <li>• The recommended changes to the policy are more effective and efficient as they increase the policy's alignment with the decisions version of the PRPS and with other policies within Chapter 28.</li> </ul>

	<p>Policy 28.3.2.2 will reduce the burden on ratepayers to fund such works. The changes also increases alignment with PRPS Policy 4.1.4(c), which requires consideration of the long term viability and affordability of measures to mitigate risk.</p>	
--	---	--

### Recommended amendments to Policy 28.3.2.3

#### Policy 28.3.2.3

Ensure all proposals to subdivide or develop land that is subject to natural hazards risk provide an assessment covering that meets the following information requirements, ensuring that the level of detail of the assessment is commensurate with the level of natural hazard risk:

- The likelihood of the natural hazard event occurring over no less than a 100 year period.
- The type, ~~frequency~~ and scale of the natural hazard and the effects of a natural hazard on the subject land.
- The effects of climate change on the frequency and scale of the natural hazard.
- The vulnerability of the activity in relation to the natural hazards.
- ~~The effects of a natural hazard event on the subject land.~~
- The potential for the activity to exacerbate the natural hazard risk both within and ~~off~~ beyond the subject land.
- The potential for any structures on the subject land to be relocated.
- The location, design and construction of buildings and structures to mitigate the effects of natural hazards, such as the raising of floor levels.
- ~~Site layout and m-~~ Management techniques ~~to avoid that~~ avoid or manage or mitigate the adverse effects of natural hazards ~~risk to a tolerable level~~, including with respect to access ingress and egress during a natural hazard event.

Costs	Benefits	Effectiveness & Efficiency
<ul style="list-style-type: none"> <li>• Previously the policy did not prescribe a minimum timeframe of the likelihood of a natural hazard event occurring and it did not require the effects of climate change to be considered. This may result in a more comprehensive assessment being required than would have been required under the notified version of the policy, which could result in additional costs to landowners.</li> <li>• Reinstating 'avoid' in the final bullet point of the policy increases the requirements for site management techniques, whereby if the risk cannot be managed to a tolerable level, then the risk will be required to be avoided, which could result in additional costs to landowners.</li> </ul>	<ul style="list-style-type: none"> <li>• The recommended amendment gives effect to the decisions version of PRPS Policy 4.1.2 which states that assessments... <i>"...assess the likelihood of natural hazard events occurring over no less than 100 years."</i></li> <li>• This change also provides certainty regarding the minimum period the assessment must cover.</li> <li>• Climate change is a relevant consideration for natural hazard management as it can influence the scale and frequency of natural hazard events.</li> <li>• Including climate change as a consideration in natural hazards assessments assists with implementing Strategic Directions Objective 3.2.4.8.1.</li> <li>• Reinstating 'avoid' in the final bullet point of the policy provides the opportunity for avoidance of risk to be required for instances when risk cannot be managed to a tolerable level. This is an appropriate outcome, and this change increases the consistency with other policies in Chapter 28, as well as increasing alignment</li> </ul>	<ul style="list-style-type: none"> <li>• The recommended changes to the policy are more effective and efficient as they increase the policy's alignment with the decisions version of the PRPS and with other policies within Chapter 28 and provide greater certainty regarding the information required to be considered in natural hazards assessments.</li> </ul>

	with PRPS Policy 4.1.6, which requires avoidance when natural hazard risk to people and communities is significantly increased.	
--	---	--

**Recommended amendments to 28.5 Information Requirements**

**28.5 Information Requirements**

~~Development proposals affected by, or potentially affected by, natural hazards as identified in Council's natural hazards database will require an accompanying assessment of natural hazards effects commensurate to the level of risk posed by the natural hazard. Council holds Council's natural hazards database identifies land that is affected by, or potentially affected by, natural hazards. The database contains~~ natural hazard information that has been developed at different scales and this should be taken into account when assessing potential natural hazard risk. It is highly likely that for those hazards that have been identified at a 'district wide' level, further detailed analysis will be required.

<b>Costs</b>	<b>Benefits</b>	<b>Effectiveness &amp; Efficiency</b>
<ul style="list-style-type: none"> <li>None identified.</li> </ul>	<ul style="list-style-type: none"> <li>The recommended changes remove inconsistencies between 28.5 and policy 28.3.2.3, whereby the natural hazards database is not intended to trigger a requirement for a natural hazards assessment to be undertaken. Rather, the database is a repository for the most up-to-date hazards information.</li> <li>The information requirements of 28.5 still highlight that the database contains information that</li> </ul>	<p>The recommended changes to the provision are more effective and efficient as they remove an inconsistency between 28.5 and 28.3.2.3, and clarify the intended use of the natural hazards database in the context of implementing Chapter 28.</p>

	has been developed at different scales and advises Plan users that further detailed analysis may be required.	
--	---	--