

# Section 32 – PC47 - Natural Hazards

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# 1 Overview and Purpose

## 1.1 Introduction to the resource management issue

- (1) The purpose of this report is to provide a Section 32 ('s32') evaluation of proposed Plan Change 47 ('PC47', 'the Plan Change'). PC47 reviews and proposes changes to the natural hazard provisions of the operative Upper Hutt City District Plan ('the District Plan'). The District Plan currently has limited consideration of natural hazards, with the only identified natural hazards being:
  - Wellington Fault Line; and
  - Mangaroa River, Hutt River and Pinehaven Stream Flood Hazards.
- (2) The District Plan became operative in 2004 and has subsequently been amended by plan changes that introduced the flood hazards layers and provisions to the plan. Since the plan became operative there have been several legislative changes and natural hazard events that have increased both the awareness of natural hazards, and the need to reduce the risk to people and property from natural hazard events through land-use planning. These changes include:
  - The inclusions of the management of significant risk from natural hazards as a matter of national importance under Section 6(h) of the Resource Management Act 1991 ('RMA', 'the Act');
  - The amendment of section 106 of the RMA to include significant natural hazard risks when considering applications for subdivision;
  - The introduction of the Wellington Regional Policy Statement 2013 ('RPS'), which requires a risk-based approach to the management of natural hazards;
  - The development of several non-statutory guidance documents on a variety of natural hazards;
  - Large international and national natural hazard events including the Japan Tohoku Earthquake, the Christchurch Earthquake Sequence and the Kaikoura Earthquake (all of which increased the awareness of natural hazards within the general public); and
  - An increased awareness of the impacts of climate change within the general community.
- (3) Inappropriate use and development within areas that are susceptible to natural hazards has the potential to directly affect the health and safety of people and communities during a natural hazard event. Similarly, affected communities and individuals can take a long time to recover from natural hazards (which can be measured in months or years depending on the scale of the event), which has significant impacts on their social and economic well-being. The management of natural hazards is therefore an important matter for District Plans to address, to allow people to provide for their social, economic, and cultural wellbeing and for their health and safety.
- (4) The proposed Plan Change framework for natural hazards seeks to manage the significant natural hazard risks associated with the following natural hazards:
  - Fault rupture from the Wellington Fault
  - Poor Ground Conditions associated with the Mangaroa Peatlands; and
  - High Slope Hazards.

## 2 Strategic directions

- (5) There are currently not strategic directions pertaining to natural hazards in the District Plan.

## 3 Regulatory and policy direction

- (6) In carrying out a s32 analysis, an evaluation is required of how the proposal achieves the purpose and principles contained in Part 2 of the RMA.
- (7) Section 5 sets out the purpose of the RMA as follows:

### **5 Purpose**

- (1) *The purpose of this Act is to promote the sustainable management of natural and physical resources.*
- (2) *In this Act, sustainable management means managing the use, development, and protection of natural and physical resources to enable people and communities to provide for their social, economic and cultural wellbeing and for their health and safety, while -*
- (a) *sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
- (b) *safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
- (c) *avoiding, remedying, or mitigating any adverse effects of activities on the environment’.*
- (8) In achieving the purpose of the Act, authorities need to recognise and provide for the matters of national importance identified in section 6 (‘s6’); have particular regard to other matters referred to in section 7 (‘s7’); and take into account the principles of the Treaty of Waitangi referred to in section 8 (‘s8’).

### **Section 6**

- (9) The s6 matter relevant to this plan change is:

*Table 1: Section 6 – Relevant Matters*

<b>Section</b>	<b>Relevant Matter</b>
6(h)	<i>Management of significant risks from natural hazards</i>  <i>Councils are now obligated to recognise and provide for the management of the significant risks of natural hazards.</i>

### 3.2 Section 7

- (10) The s7 matters that are relevant to this topic are:

*Table 2: Section 7 – Relevant Matters*

<b>Section</b>	<b>Relevant Matter</b>
7(i)	<i>The effects of climate change</i>

Section	Relevant Matter
	<i>Climate change is predicted to exacerbate the risk of natural hazards, in particular increased rainfall which may result in increased slope failure occurring.</i>

### 3.3 Section 8

(11) Section 8 is relevant to this proposal. Natural Hazards have the potential to impact iwi in a number of ways, including:

- Increasing the risk to their members lives and property;
- Loss of areas of cultural value due to erosion and other natural hazard processes; and
- Loss of cultural practices due to erosion and other natural hazard processes.

### 3.4 Section 31

(12) Section 31 of the Act outlines the function of territorial authorities. Section 31 states:

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

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

(b) *the control of any actual or potential effects of the use, development, or protection of land, including for the purpose of—*

(i) *the avoidance or mitigation of natural hazards; and*

(13) As such, the proposed natural hazards hazard provisions directly respond to one of the identified functions that territorial authorities have under the Act.

### 3.5 Section 106

(14) Section 106 is also a relevant consideration. Section 106 pertains to the consideration of subdivision applications and states:

**106 Consent authority may refuse subdivision consent in certain circumstances**

(1) *A consent authority may refuse to grant a subdivision consent, or may grant a subdivision consent subject to conditions, if it considers that—*

(a) *there is a significant risk from natural hazards; or.....*

(1A) *For the purpose of subsection (1)(a), an assessment of the risk from natural hazards requires a combined assessment of—*

(a) *the likelihood of natural hazards occurring (whether individually or in combination); and*

(b) *the material damage to land in respect of which the consent is sought, other land, or structures that would result from natural hazards; and*

(c) *any likely subsequent use of the land in respect of which the consent is sought that would accelerate, worsen, or result in material damage of the kind referred to in paragraph (b).*

(2) *Conditions under subsection (1) must be—*

(a) for the purposes of avoiding, remedying, or mitigating the effects referred to in subsection (1); and

(b) of a type that could be imposed under section 108.

(15) The proposed natural hazard hazards provisions will assist with the consideration of subdivision applications against Section 106 as they will provide guidance around what is considered to be acceptable risk.

### 3.6 National Instruments

(16) There are five National Policy Statements (NPS) currently in force:

- New Zealand Coastal Policy Statement 2010;
- NPS on Electricity Transmission 2008;
- NPS for Renewable Electricity Generation 2011;
- NPS for Freshwater Management 2014;
- NPS on Urban Development 2020; and
- NPS for Freshwater Management 2020.

(17) There are no relevant provisions within the National Policy Statements that are applicable to the development of the natural hazard provisions.

(18) There are also six National Environmental Standards (NES) currently in force:

- NES for Air Quality 2004;
- NES for Sources of Drinking Water 2007;
- NES for Electricity Transmission Activities 2009;
- NES for Assessing and Managing Contaminants in Soil to Protect Human Health 2011;
- NES for Telecommunication Facilities 2016;
- NES for Plantation Forestry 2017;
- NES Freshwater 2020;
- NES for Marine Aquaculture 2020; and
- NES for Storing Tyres Outdoors 2021.

(19) The following standard and associated provisions are relevant to this Plan Change:

*Table 3: Relevant NES Provisions*

NES	Relevant Regulations
NES Telecommunication Facilities 2016	Section 57 of the NESTF 2016 states that a territorial authority cannot make a natural hazard rule that applies to an identified regulated activity. The regulated activities are identified within Part 4 of the NESTF.  The proposed provisions within this plan change are consistent with the requirements of the NESTF and do not impose control over the identified regulated activities.

NES Freshwater 2020	Regulation 51 permits natural hazard mitigation work around wetlands. However, this regulation only applies to Regional Council functions (as identified under Regulation 5) and does not affect territorial authorities.
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### 3.7 National Planning Standards

- (20) The National Planning Standards require that natural hazards be covered in a Natural Hazards chapter. Upper Hutt City has a range of natural hazards. As such, the provisions to address these topics have been included in the District Plan. It should be noted that, due to the drafting requirements of the National Planning Standards, the natural hazard related provisions for the following topics are located in the following chapters:

*Table 4: Summary of Location of Relevant Provisions under the National Planning Standards*

Subject	Location of Objectives and Policies	Location of Rules
Land Use and Development provisions	Natural Hazards Chapter	Natural Hazards Chapter
Subdivision provisions pertaining to natural hazards	Natural Hazards Chapter	Subdivision Chapter
Earthworks provisions pertaining to natural hazards	Natural Hazards Chapter	Earthworks Chapter

### 3.8 National Guidance Documents

- (21) The following national guidance documents are considered relevant to this plan change:

*Table 5: National Guidance Documents*

Document	Date	Author	Summary
Risk management - Principles and guidelines AS/NZS ISO 31000:2009	2009	Standards Australia Standards New Zealand	All Hazards - Contains national guidance around the management of risk.
SA/SNZ HB 436:2013 Risk management guidelines — Companion to AS/NZS 31000:2009	2013	Standards Australia Limited / Standards New Zealand	
Risk-based land use planning for natural hazard risk reduction	2013	GNS Science	All Hazards – Provides the basis for taking a risk-based approach to the management of natural hazards.
Planning for development of land on or close to active faults: A guideline to assist resource management planners in New Zealand	2003	Ministry for the Environment	Provides guidelines to consider when planning for development close to faults that will have relevance to hazards policy development in District Plans.  The guidelines recommend a risk-based approach, based on risk management standard AS/NZS 4360:1999 (latterly AS/NZS ISO 31000:2009).

Document	Date	Author	Summary
			<p>The risk-based approach combines the key elements of</p> <ul style="list-style-type: none"> <li>• Fault recurrence interval;</li> <li>• Fault Complexity; and</li> <li>• Building Importance Category.</li> </ul> <p>The guidance recommends that for land use planning purposes, faults should be mapped and classified at a minimum scale of 1:10,000.</p>
Guidelines for assessment planning policy and consent requirements for landslide prone land	2007	GNS Science	<p>Non-statutory guidance to assist planners (and other interested parties) in determining whether planning documents and resource consent applications at regional and district levels incorporate appropriate information on landslide and slope instability hazards.</p> <p>Includes criteria used to assess landslide hazards at the consent stage, and examples of issues, objectives, policies, rules, and assessment criteria.</p>
Planning and Engineering guidance for potentially liquefaction-prone land.	2017	MBIE	<p>Non statutory guidance for a risk-based process to manage liquefaction related risk in land use planning and development decision-making. This includes the formation of objectives, policies and rules for liquefaction for District Plans.</p>

## 3.9 Regional Policy and Plans

### 3.9.1 The Regional Policy Statement for the Wellington Region (RPS)

(22) The table below identifies the relevant provisions for PC47 contained in the RPS.

*Table 6: RPS - Relevant Provisions*

RPS – relevant provisions	
Objective 20	<p>Objective 20 requires that <i>Hazard mitigation measures, structural works and other activities do not increase the risk and consequences of natural hazard events</i>. This means that consideration needs to be given to limiting hazard mitigation works in areas where it is inappropriate to have these works. When hazard mitigation works are provided for, the consenting framework needs to consider potential changes to the natural hazard risk, including the risk to neighbouring properties from the works.</p>
Objective 21	<p>Objective 21 requires that <i>Communities are more resilient to natural hazards, including the impacts of climate change, and people are better prepared for the consequences of natural hazard events</i>. This means that the proposed provisions need to improve community resilience and account for climate change. It is recognised that resilience can be improved by a number of factors including:</p> <ul style="list-style-type: none"> <li>• allowing for hazard mitigation works;</li> </ul>



RPS – relevant provisions	
	<ul style="list-style-type: none"> <li>• requiring developments to avoid or mitigate the risk from natural hazards;</li> <li>• improving infrastructure resilience; and</li> <li>• maintaining natural features that protect against natural hazards.</li> </ul>
Policy 29 (M)	<p>Policy 29 seeks to <i>avoid inappropriate subdivision and development in areas at high risk from natural hazards</i>. This means that when developing the District Plan framework, development and subdivision within the high hazard areas are limited to only those that are appropriate.</p>
Policy 51 (R)	<p>Policy 51 states: <i>When considering an application for a resource consent, notice of requirement, or a change, variation or review to a district or regional plan, the risk and consequences of natural hazards on people, communities, their property and infrastructure shall be minimised, and/or in determining whether an activity is inappropriate particular regard shall be given to:</i></p> <ul style="list-style-type: none"> <li>• <i>the frequency and magnitude of the range of natural hazards that may adversely affect the proposal or development, including residual risk;</i></li> <li>• <i>the potential for climate change and sea level rise to increase the frequency or magnitude of a hazard event;</i></li> <li>• <i>whether the location of the development will foreseeably require hazard mitigation works in the future;</i></li> <li>• <i>the potential for injury or loss of life, social disruption and emergency management and civil defence implications – such as access routes to and from the site;</i></li> <li>• <i>any risks and consequences beyond the development site;</i></li> <li>• <i>the impact of the proposed development on any natural features that act as a buffer, and where development should not interfere with their ability to reduce the risks of natural hazards;</i></li> <li>• <i>avoiding inappropriate subdivision and development in areas at high risk from natural hazards;</i></li> <li>• <i>the potential need for hazard adaptation and mitigation measures in moderate risk areas; and</i></li> <li>• <i>the need to locate habitable floor areas and access routes above the 1:100 year flood level, in identified flood hazard areas.</i></li> </ul> <p>Policy 51 provides a framework for a risk-based approach.</p>
Policy 52 (R)	<p>Policy 52 states: <i>When considering an application for a resource consent, notice of requirement, or a change, variation or review of a district or regional plan, for hazard mitigation measures, particular regard shall be given to:</i></p> <ul style="list-style-type: none"> <li>• <i>the need for structural protection works or hard engineering methods;</i></li> <li>• <i>whether non-structural or soft engineering methods are a more appropriate option;</i></li> <li>• <i>avoiding structural protection works or hard engineering methods unless it is necessary to protect existing development or property from unacceptable risk and the works form part of a long-term hazard management strategy that represents the best practicable option for the future;</i></li> <li>• <i>the cumulative effects of isolated structural protection works; and</i></li> </ul>

RPS – relevant provisions	
	<ul style="list-style-type: none"> <li>residual risk remaining after mitigation works are in place,</li> <li>so that they reduce and do not increase the risks of natural hazards.</li> </ul> <p>Policy 52 provides the matters that need to be considered when developing a framework for the consideration of structural (hard engineering) and non-structural (soft engineering) measures for natural hazards.</p>

M = policies which must be **implemented** in accordance with stated methods in the RPS

R = policies to which **particular regard** must be had when varying a district plan

### 3.9.2 Operative Regional Plans

(23) There are currently five operative regional plans for the Wellington region, listed below:

- Regional Freshwater Plan, 1999
- Regional Air Quality Management Plan, 2000
- Regional Soil Plan, 2000
- Regional Plan for Discharges to Land, 1999
- Regional Coastal Plan, 2000

(24) The only relevant regional plan that applies to this plan change is the Regional Soil Plan. The relevant provisions of the Regional Soil Plan are as follows:

*Table 7: Regional Soil Plan – Relevant Provisions*

Regional Soil Plan	
<i>Objective 4.1.8</i>	<i>Any adverse effects of accelerated erosion are avoided, remedied or mitigated.</i>
<i>Objective 4.1.9</i>	<i>On erosion prone areas vegetative cover is maintained (including maintained through revegetation), enhanced or established; or where the retention of vegetation is not practical, other methods are used so that the adverse effects of erosion are avoided, remedied or mitigated.</i>
<i>Policy 4.2.1</i>	<i>To promote land management practices that recognise the inherent susceptibility of some landforms to erosion.</i>
<i>Policy 4.2.14</i>	<p><i>To avoid, remedy or mitigate the adverse effects of vegetation disturbance by promoting:</i></p> <ul style="list-style-type: none"> <li><i>the maintenance and enhancement of vegetation in erosion prone areas;</i></li> <li><i>the conversion of erosion prone areas to forestry or soil conservation woodlots, or regeneration or active restoration to native bush;</i></li> <li><i>riparian management, including where this will help safeguard the life-supporting capacity of aquatic ecosystems;</i></li> <li><i>compliance with industry recognised standards and procedures such as the Logging Industry Research Organisation's (LIRO) "Forestry Code of Practice" (Second Edition, 1993); and/or</i></li> <li><i>the maintenance and retention of erosion control plantings.</i></li> </ul>
<i>Policy 4.2.15</i>	<p><i>To regulate soil disturbance activities to ensure that they are unlikely to have significant adverse effects on:</i></p> <ul style="list-style-type: none"> <li><i>erosion rates;</i></li> <li><i>soil fertility;</i></li> <li><i>soil structure;</i></li> </ul>

Regional Soil Plan	
	<ul style="list-style-type: none"> <li>• flood mitigation structures and works;</li> <li>• water quality;</li> <li>• downstream locations;</li> <li>• bridges, culverts and other water crossing structures;</li> <li>• aquatic ecosystems; and</li> <li>• historic sites with tangata whenua values.</li> </ul>
Rule 2	<p><i>Soil disturbance on erosion prone land</i>  <i>Any soil disturbance on erosion prone land that:</i></p> <ul style="list-style-type: none"> <li>• involves the disturbance of greater than or equal to 1,000 m<sup>3</sup> of soil, within any 10,000 m<sup>2</sup> area (calculated using a minimum width of 10m) and within any continuous 12 month period; or</li> <li>• involves root raking over an area greater than 10,000 m<sup>2</sup> in any continuous 12 month period;</li> <li>• excluding any soil disturbance; <ul style="list-style-type: none"> <li>(a) associated with roading and tracking activities, or</li> <li>(b) undertaken in accordance with conditions on a subdivision consent;</li> </ul> </li> </ul> <p><i>is a Restricted Discretionary Activity.</i></p>
Rule 3	<p><i>Vegetation disturbance on erosion prone land</i>  <i>Vegetation disturbance, excluding vegetation disturbance undertaken in accordance with conditions on a subdivision consent, of a continuous area of more than one hectare on erosion prone land is a Permitted Activity provided the following conditions are met:</i></p> <p><i>Conditions</i></p> <ul style="list-style-type: none"> <li>• <i>The Wellington Regional Council’s Regional Soil Conservator is notified in writing at least 21 days prior to the vegetation disturbance being undertaken. Notification is to include details of the site location and timing of the vegetation disturbance operation.</i></li> <li>• <i>The area of vegetation disturbance will be re-established in woody vegetation within 18 months from the start of the vegetation disturbance operation.</i></li> <li>• <i>Where ground-based methods are used, best management practices as described in the New Zealand Forest Code of Practice (LIRO 1990, revised 1993) are adopted.</i></li> <li>• <i>No vegetation or slash with a diameter of greater than 100 mm shall be allowed to remain in any watercourse and when removed, shall be placed in a position where that material cannot enter any watercourse.</i></li> </ul>

(25) The above provisions will be replaced by the Proposed Natural Resources Plan for the Wellington Region. However, at the time of preparing this Plan Change and supporting Section 32 report, they still have operative weight.

### 3.9.3 Proposed Natural Resources Plan (PNRP)

(26) The PNRP was notified in July 2015. It contains rules affecting use and development of natural resources that come under the jurisdiction of Greater Wellington Regional Council with regard to its functions under section 68 of the RMA. These rules have immediate effect under section 86B of the RMA. These include provisions relating to taking, damming and diverting water, and discharges onto land or into water, and management of the coastal marine area within the Wellington Region. District Plans must not be inconsistent with regional plans as required by section 75(4) of the RMA. At the time of writing this Section 32 report, decisions on submissions had been released, appeals had been

lodged on those decisions and the appeals are currently being resolved through mediation and consent orders.

(27) The following objectives and policies are relevant to the consideration of natural hazards.

*Table 8: PNRP - Relevant Provisions*

<b>PNRP – Relevant provisions</b>	
<i>Objective 20</i>	<i>The hazard risk, and residual hazard risk, from natural hazards and adverse effects of climate change, on people, the community, the environment, and infrastructure are acceptable.</i>
<i>Objective 21</i>	<i>Inappropriate use and development in high hazard areas is avoided.</i>
<i>Policy 27 – High risk areas *</i>	<p><i>Use and development, including hazard mitigation methods, in high risk areas shall be avoided except where:</i></p> <ul style="list-style-type: none"> <li><i>(a) they have a functional need or operational requirement or there is no practicable alternative to be so located, and</i></li> <li><i>(b) an overall increase in risk of social, environmental and economic harm is avoided, and</i></li> <li><i>(c) the hazard risk to the development and/or residual hazard risk after hazard mitigation measures, assessed using a risk-based approach, is acceptable or as low as reasonably practicable, recognising that in some instances an increase in risk to the development may be appropriate, and</i></li> <li><i>(d) the development does not cause or exacerbate natural hazard risk in other areas, and unless effects are avoided, remedied or mitigated in accordance with a hazard risk management strategy, and</i></li> <li><i>(e) adverse effects on natural processes (coastal, riverine and lake processes) are avoided, remedied, or mitigated, and</i></li> <li><i>(f) natural cycles of erosion and accretion and the potential for natural features to fluctuate in position over time, including movements due to climate change and sea level rise over at least the next 100 years, are considered.</i></li> </ul>
<i>Policy 28 Hazard Mitigation Measures *</i>	<p><i>Hard hazard engineering mitigation and protection methods shall be discouraged except where it is necessary to protect</i></p> <ul style="list-style-type: none"> <li><i>a) Existing, or upgrades to, infrastructure including regionally significant infrastructure; or</i></li> <li><i>b) New regionally significant infrastructure; or</i></li> <li><i>c) Significant existing development, and</i></li> </ul> <p><i>In respect of (a), (b) and (c)</i></p> <ul style="list-style-type: none"> <li><i>d) there is no reasonable or practicable alternatives to mitigate natural hazard risk and residual hazard risk, and</i></li> <li><i>e) the mitigation and protection methods are suitably located and designed, and where appropriate certified by a qualified, professional engineer, and</i></li> <li><i>f) The use of soft engineering options are incorporated and used, where appropriate,</i></li> </ul> <p><i>And either</i></p> <ul style="list-style-type: none"> <li><i>(g) Any adverse effects are no more than minor, or</i></li> <li><i>(h) Where the environmental effects are more than minor the works form part of a hazard risk management strategy,</i></li> </ul>

PNRP – Relevant provisions	
<i>Policy 30 – Natural Buffers*</i>	<i>Provide for the restoration or enhancement of natural features such as beaches, dunes or wetlands that buffer development from natural hazards shall be and ensure the adverse effects of use and development on them are avoided, remedied or mitigated</i>

Note: \* indicates that the provision is subject to appeals and therefore may change as a result of the appeals process.

### 3.10 Iwi Management Plan

(28) There is no Iwi Management Plan that is applicable to Upper Hutt that requires consideration as part of this Plan Change.

### 3.11 Any relevant plans or strategies

(29) There are several non-RMA plans and strategies that are relevant to this topic. These are outlined in the table below:

*Table 9: Relevant Plans or Strategies*

Plan / Strategy	Organisation	Relevant Provisions
Wellington Regional Emergency Management Group Plan 2019 - 2029	Wellington Emergency Management Office	<ul style="list-style-type: none"> <li>• Recognises that risk reduction (which is one of the four Rs under the Civil Defence and Emergency Management Act 2002) is primarily achieved through the RMA processes.</li> <li>• One of the key actions under the Risk Reduction component of the Group Plan is: <ul style="list-style-type: none"> <li>○ <i>Take into account hazards and risks in land-use planning practices and ensure relevant risk reduction policies are consistent with the Regional Policy Statement (RPS).</i></li> </ul> </li> </ul>
Natural Hazards Management Strategy	Greater Wellington Regional Council	<ul style="list-style-type: none"> <li>• The Wellington Regional Natural Hazards Management Strategy sets a regional approach to the management of natural hazards. The key objectives of this strategy are as follows: <ul style="list-style-type: none"> <li>○ <i>Our natural hazards and risks are well understood</i></li> <li>○ <i>Our planning takes a long term risk-based approach</i></li> <li>○ <i>Consistent approaches are applied to natural hazard risk reduction</i></li> <li>○ <i>We have an agreed set of priorities to reduce risks from natural hazards.</i></li> </ul> </li> </ul>
Land Use Strategy	Upper Hutt City Council	<ul style="list-style-type: none"> <li>• The Land Use Strategy has identified that there is a need to plan carefully for future growth so that inappropriate development and subdivision in areas of high risk from natural hazards is avoided. The key natural hazards that are identified include:</li> </ul>

Plan / Strategy	Organisation	Relevant Provisions
		<ul style="list-style-type: none"> <li>○ Fault Hazards</li> <li>○ Flooding; and</li> <li>○ Slope Hazards.</li> </ul>
Long-term Plan 2021 - 2031	Upper Hutt City Council	<ul style="list-style-type: none"> <li>● Climate change and its impacts on natural hazards are identified as an issue with the Upper Hutt City Long Term Plan. The climate change challenges that have been identified includes: <ul style="list-style-type: none"> <li>○ Increased likelihood of flood events affecting economy, lifestyle and transport.</li> <li>○ Increased likelihood of droughts as temperatures increase affects how we manage the effects on our indigenous biodiversity and parks and reserves.</li> </ul> </li> <li>● The natural hazards plan change is viewed as one of the responses to addressing future challenges presented by climate change.</li> <li>● The Long Term Plan also identifies infrastructure and improving the resilience of infrastructure as a response to future natural hazard risk.</li> <li>● Natural hazards, including climate change, are identified as a factor that has a medium level of uncertainty in terms of how they will impact the City over the period of the Long Term Plan. There is the potential that if a large event was to occur there could be an impact on the integrity of the Long-Term Plan as a result of the repairs needed to recover.</li> </ul>
Upper Hutt City Council Code of Practice for Civil Engineering Works	Upper Hutt City Council	<ul style="list-style-type: none"> <li>● Requires the consideration of natural hazards including flooding and slope stability when identifying building platforms and servicing design. However, in many instances the consideration of natural hazards is identified as one of a range of factors that must be considered and for many hazards there is not performance criteria that needs to be met.</li> <li>● Sets the acceptable level of service when designing developments to manage flooding, including freeboard requirements and the location and securing of secondary overland paths.</li> <li>● Sets the engineering requirements that earthworks need to meet.</li> </ul>
Sustainability Strategy	Upper Hutt City Council	<ul style="list-style-type: none"> <li>● Objective four of the Strategy states: Our community will be resilient, adaptable and inclusive.</li> <li>● This Objective is supported by several actions that specifically relate to natural hazards including:</li> </ul>

Plan / Strategy	Organisation	Relevant Provisions
		<p>4.1 Evaluate how resilient Upper Hutt houses are to withstand extreme events and circumstances</p> <p>4.3 Work towards new developments being more resilient</p> <p>4.7 Promote safe, healthy resilient communities equipped and engaged to be self-support in times of need</p> <p>4.10 Inform the community about being prepared for extreme circumstances.</p>

### 3.12 Any other relevant legislation or regulations

#### 3.12.1 Legislation

(30) Natural hazards are managed in New Zealand under several statutes. The primary pieces of legislation considered most relevant to local government processes are

- the Civil Defence Emergency Management Act 2002 (CDEM Act);
- the RMA 1991;
- the Building Act 2004; and
- the Local Government Act 2002 (LGA).

(31) Figure 1 below sets out the relationship between the different pieces of legislation.

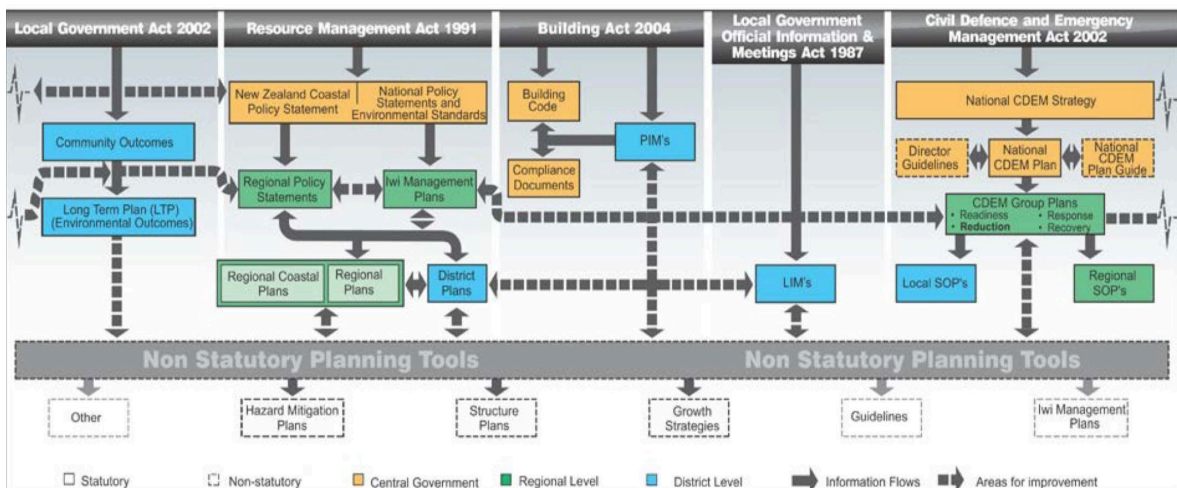


Figure 1: Legislative tools available for managing natural hazards in New Zealand (Saunders, 2017)

(32) The table below outlines how these legislations manage natural hazard risk at a local government level. Each of these legislations has its own distinct role to play in the management of natural hazard risk, and they all rely on the RMA to assist with the management of natural hazard risk through controlling the location of different land-use activities. It is important to recognise that while the four pieces of legislation below play an important role in managing natural hazard risk, their roles complement the RMA process as opposed to duplicating or overriding District Plan provisions.

Table 10: Other Relevant Legislation

Legislation / Regulation	Relevant Provisions
Building Act 2004	<ul style="list-style-type: none"> <li>• While the RMA is focused on ensuring that the use of land sufficiently avoids or mitigates the potential effects of natural hazards, the Building Act concerns itself with ensuring that any building constructed is safe and fit for purpose, including consideration of the risks from natural hazards, through compliance with the Building Code regulations.</li> <li>• Section 71 of the Building Act ('BA') requires that a territorial authority ('TA') refuse consent for the construction of a building or major alterations on land that is subject to natural hazards where the proposed works will accelerate, worsen, or create a hazard on the land or any other property, unless the TA considers adequate mitigation measures are taken to protect the land, building or other property. However, section 72 does allow building consent authorities to grant building consent for land subject to natural hazards with no mitigation when it is determined that the proposed works will not accelerate, worsen, or create a hazard, and it is considered reasonable to grant a waiver or modification of the Building Code. In these situations, the property owner takes on the risk which is recorded on the title for the property through procedures under section 73 of the BA.</li> <li>• The Building Code regulations established under the Building Act set certain performance requirements for new buildings, for example that surface water must not enter houses in a 1 in 50 year (2% AEP) flood event (Clause E1.3.2).</li> <li>• In addition, section 31 provides for the preparation of Project Information Memoranda (PIM) when requested from the TA. While not compulsory, a PIM will identify any special feature of the land, which includes susceptibility to natural hazards, such as the potential for erosion, slippage, or flooding.</li> </ul>
Civil Defence Emergency Management Act 2002	<ul style="list-style-type: none"> <li>• The CDEM Act provides the framework under which natural hazards are to be managed, and sets out the duties, responsibilities and powers of central and local government, lifeline utilities and emergency services. It establishes an 'all-hazards' approach that seeks to achieve the sustainable management of hazard risk through the '4 R's' of reduction, readiness, response and recovery. The CDEM Act, which is administered by the Ministry of Civil Defence and Emergency Management ('MCDEM'), requires the formation of several regional CDEM Groups<sup>1</sup> and each must prepare a CDEM Group Plan that details how the risks that threaten their region will be managed. It is generally expected that the risk reduction component of the CDEM Group plans will be achieved through land use planning measures under the RMA.</li> </ul>
Local Government Act 2002	<ul style="list-style-type: none"> <li>• The LGA provides the obligations and powers of local government and the general framework under which they must operate. Section 10 states that the purpose of the LGA is to enable democratic local decision-making that meets the current and future needs of communities in terms of infrastructure, services and regulatory performance in a cost-effective manner.</li> <li>• Section 11A(d) directs that in performing its role, local government shall have particular regard to the avoidance and mitigation of natural hazards. It is under the LGA that the Long Term Plan (LTP) is prepared by local authorities, which</li> </ul>

<sup>1</sup> CDEM Groups are made up of representatives from territorial authorities, regional council, emergency services and lifeline utilities.



Legislation / Regulation	Relevant Provisions
	<p>must cover a period of at least 10 years and provide for integrated and co-ordinated decision-making. It provides a description of local authority activities, which can include actions to manage the effects of natural hazards and climate change.</p> <ul style="list-style-type: none"> <li>• Section 145(b) gives local authorities powers to make bylaws for the purpose of protecting, promoting, or maintaining public health and safety.</li> <li>• Under section 149, regional councils have the power to make bylaws for flood protection and flood control works.</li> </ul>

### 3.12.2 International Agreements

(33) Since 2015, the framework for managing natural hazards in New Zealand has become increasingly influenced by the Government’s commitment to three main global agreements, being:

- the Sendai Framework for Disaster Risk Reduction (2015);
- the Paris Agreement on Climate Change 2016; and
- the 2030 Agenda for Sustainable Development (under which the Sustainable Development Goals (SDGs) are identified).

(34) The Sendai Framework in particular, seeks to shift the focus from managing natural disasters to managing risk and strengthening the resilience of people and communities. This is supported by four priorities for action:

1. Improving the understanding of disaster risk;
2. Strengthening disaster risk governance at all levels;
3. Promoting public and private investment in disaster risk reduction to enhance resilience; and
4. Strengthening of disaster preparedness, and the need to ‘build back better’.

## 4 Resource Management Issues Analysis

### 4.1 Background

(35) Upper Hutt City is impacted by a range of natural hazards. The impacts of these hazards vary, with some hazards having the potential to have significant wider impacts on the City and other hazards having impacts at a property level. The District Plan already contains natural hazard provisions pertaining to the following matters:

- Wellington Fault Rupture; and
- Hutt River, Mangaroa River and Pinehaven Stream Flood Hazards.

(36) The nature of these provisions varies depending on their age. The Wellington Fault and Hutt River Flood Hazard provisions were first developed when the District Plan became operative in 2004. As such, these provisions are relatively simple and apply to all buildings within these mapped extents.

(37) The Mangaroa River and Pinehaven Stream provisions became operative in 2019. These provisions are more nuanced and apply to a wider range of activities than the Wellington Fault and the Hutt River Flood Hazard provisions.

- (38) Under the RMA, District Plan provisions are required to be reviewed every 10 years. The Wellington Fault and Hutt River provisions are older than 10 years and therefore need to be reviewed. This plan change reviews the Wellington Fault provisions. The flood hazard provisions however will be reviewed in a future plan change because the stormwater flood modelling for the City that will inform such a review is currently still being prepared.
- (39) Since the fault hazard provisions first became operative, there have been several changes including:
- Revised hazard maps the Wellington Fault line
  - The RMA has changed and a risk based approach to the management of natural hazards is now required; and
  - The mechanisms used for planning for natural hazard have change.
- (40) As part of the evidence gathering for Plan Change 50 (Rural and Residential chapter review), two further natural hazards that impact Upper Hutt have been identified:
- Areas of high slope angle; and
  - Poor Ground Conditions in the Mangaroa Peat Overlay.

## 4.2 Geographic Extent

- (41) The geographic extent of the varying natural hazard covered in this plan change are as follows:

### **Wellington Fault Overlay**

The Wellington Fault passes along the western edge of the City. The fault line generally follows the alignment of the Hutt River, in the southern portion of the City, before passing through Totara Park and Emerald Hill. Through Kaitoke, the fault line is located to the immediate west of State Highway 2.

### **High Slope Hazard Overlay**

All natural soils and rock within Upper Hutt District are regarded as generally stable up to a 26 degree slope angle. For natural slope angles greater than 26 degrees slope instability might occur, with increasing likelihood of instability as the slope angle increases. The high slope hazard is largely located on the hillsides the forms the boundaries to the Upper Hutt Urban and Rural Environments. This overlay has the greatest geographic extent of the three overlays that are proposed as part of this Plan Change.

### **Mangaroa Peat Overlay**

The poor ground conditions area is a geographically constrained area around the Mangaroa Peatlands. This area has soft wet soils, which have the potential to impact the structural integrity of buildings that are not constructed in a manner that responds to these ground conditions.

- (42) It is recognised that these are not the only hazards that impact the Upper Hutt City. Other hazards that impact Upper Hutt City include:
- Flooding;
  - Fire; and
  - Ground shaking from earthquakes.
- (43) The flood hazards in the Upper Hutt City have been partially addressed through the Pinehaven and Mangaroa River Flood Hazard Plan Change. Further modelling is being undertaken of stormwater

flooding within the Upper Hutt urban environment (excluding Pinehaven) and the Hutt River. These outstanding flood hazards will be addressed in a future plan change, once the modelling has been completed.

- (44) In relation to fire, it is considered that this hazard is best addressed through the response provisions under the CDEM Group Plan that has been prepared under the CDEM Act 2002.
- (45) Ground shaking is addressed through the Building Code of the Building Act 2004. As such, any further District Plan provisions around this hazard would be a duplication of the considerations under the Building Act 2004 and would not be an effective or efficient response to this hazard.

### 4.3 Evidence Base - Research, Consultation, Information and Analysis undertaken

- (46) The Council has reviewed the current District Plan, commissioned technical advice and utilised this information, along with internal workshops and community feedback, to assist with setting the plan framework for natural hazards.
- (47) The findings of technical experts have been used to inform the identification and assessment of the environmental, economic, social and cultural effects that are anticipated from the implementation of the provisions. This advice includes the following:

*Table 11: Technical Advice*

Title	Author	Brief synopsis
Upper Hutt City Council Residential and Rural Chapter Review – 773-WLGGE22406AB August 2020	Coffey Services Limited	Contains the modelling and evidence base for the Mangaroa Peat Overlay and the High Slope Hazard
Upper Hutt Fault Trace Project Client Report 2005/151 December 2005	GNS Science	Contains the evidence base for the Wellington Fault Hazard Overlay
Mangaroa Peatlands Extent – Mapping Updated, dated 25 February 2022	Tetra Tech Coffey	Provides updated mapping based on site visits to a number of properties within the Mangaroa Peat Overlay.
Revision of Fault Avoidance Zones for the Wellington Fault in Upper Hutt City dated 14 March 2022	GNS Science	Provides an updated assessment on the position of the Wellington Fault and associated branches. The updated report resulted in some changes to the location of the Wellington Fault in the northern portion of the City.

#### 4.3.1 Analysis of the Operative District Plan provisions for this topic

- (48) A review was undertaken of the operative District Plan. This showed that the District Plan currently has very limited direction or guidance on natural hazards and does not implement the higher-level direction set by the RMA and RPS. This stocktake reviewed the following information sources:
  - The existing District Plan and its approach to natural hazards;
  - The existing evidence base for natural hazards in Upper Hutt City, including research undertaken by third parties such as GNS Science; and

- The CDEM Group Plan for the Wellington Region, which provides the ranking of natural hazard risk for the region.

(49) This analysis concluded the following:

- There are a range of natural hazards that affect Upper Hutt City. However, there are also several natural hazards (for example volcanic eruptions and tsunami), which do not impact the City.
- The operative issues and provisions do not adequately address the various natural hazards that impact Upper Hutt City and have very limited applicability to the majority of the development typologies that are undertaken in the City;
- Higher order RMA policy documents require the consideration of a wide range of natural hazards and the existing provisions do not address the majority of these hazards;
- The higher order documentation requires a risk-based approach to the management of natural hazard risk, and the existing provisions do not take a risk-based approach;
- New issues were needed to respond to the natural hazard risk and the legislative responsibilities of Upper Hutt City Council; and
- The District Plan has limited direction or guidance on natural hazards and does not fully implement the higher level direction set by the RMA and RPS.

#### 4.3.2 Analysis of Provisions in Other District Plans for this Topic

(50) Current practice has been considered in respect of this topic, with a review undertaken of the following District Plans (refer Appendix 1 where a detailed analysis of these plans is undertaken). All these plans predate the National Planning Standards:

Table 12: Other District Plans

Plan	Local Authority	Description of approach
Dunedin City Council District Plan	Dunedin City Council	<ul style="list-style-type: none"> <li>• A risk-based approach is taken where activities are classified based on their sensitivity to the effects of natural hazard events of different likelihoods to produce an assessment of low, moderate, or high risk.</li> <li>• Sensitivity of activities is based on the building importance levels defined in the Building Code.</li> <li>• Likelihood estimates are indicatively applied, rather than specifically modelled. Where likelihood is unknown or poorly established, a likelihood of 'moderately likely' is applied.</li> <li>• This approach forms the basis of the policy framework which seeks that the risk from natural hazards (including climate change) is no more than low.</li> <li>• Policies and rules are attached to different overlays (eight overlay zones and two mapped areas (swales and dune systems)):</li> <li>• Activity status becomes more restrictive with increasing risk and sensitivity of proposed activity.</li> <li>• While liquefaction is not mapped, Policy 2.2.1.10 requires that in areas identified as having a moderate to high</li> </ul>

Plan	Local Authority	Description of approach
		<p>likelihood of susceptibility to liquefaction, changes in zoning to permit rural residential or residential activity shall only be allowed where the risks from liquefaction are no more than low or can be mitigated so that they will be no more than low.</p>
Christchurch District Plan (2017)	Christchurch City Council	<ul style="list-style-type: none"> <li>• Risk-based approach that considers the various scales of a particular natural hazard event (e.g. different magnitude earthquakes and different intensities and durations of rainfall events) together with the likelihood of that particular event occurring and the effects that it would cause, particularly on people and property.</li> <li>• In areas where risk from natural hazards is considered unacceptable and the risks cannot be practically reduced to acceptable levels, new activities are generally to be avoided. In areas where risk may be able to be mitigated to acceptable levels, Council may require site specific assessment. Where risk is considered to be acceptable and similar to the levels of everyday risks faced, no intervention is required by the District Plan.</li> <li>• Risk is expressed in a number of ways, e.g. the risk to life is the primary concern in areas susceptible to slope instability, whereas in most areas at risk from flooding, the primary concern is the damage to property and the frequency with which this may occur.</li> <li>• Use of Annual Individual Fatality Risk (AIFR) metric in areas of slope instability, which is the probability of a fatality for an individual occupying a specific site in any one year due to slope instability. A life safety risk of <math>\geq 10^{-4}</math> is considered an unacceptable risk to life. Underlying assumptions include: <ul style="list-style-type: none"> <li>○ The percentage of time that an individual is present on a site.</li> <li>○ The level of seismicity.</li> <li>○ Whether or not people evacuate after a major seismic event.</li> </ul> </li> <li>• Given the uncertainty present in calculations of AIFR, the District Plan allows for risk to be recalculated on a site-specific basis by a suitably qualified person.</li> <li>• In areas of flooding, Annual Exceedance Probability (AEP) is used to describe the likelihood of a flood event of a certain size occurring. Flood risk is primarily managed by specifying minimum floor levels.</li> <li>• In areas where there is likely to be a liquefaction risk to property, no specific measure of risk is applied. The area mapped is based on whether liquefaction is more likely to occur than not. Within that area, liquefaction risk and appropriate mitigation is assessed on a site-specific basis</li> </ul>

Plan	Local Authority	Description of approach
		<p>using best practice geotechnical and engineering methods to determine the performance of infrastructure and buildings.</p>
Auckland Unitary Plan	Auckland Council	<ul style="list-style-type: none"> <li>• The Unitary Plan takes a risk-based approach to address the risks associated with natural hazards. A risk management approach applies to existing development and infrastructure, while a risk reduction (including avoidance where appropriate) approach applies to development of greenfield land. Risk assessment needs to consider both current and future risks, including the effects of climate change, such as sea level rise.</li> <li>• The Plan states that risks from events with low probability but high potential impact (e.g. volcanic activity, tsunamis and earthquakes) cannot be addressed through land use planning and may be better addressed through measures put in place by emergency management groups, including education, warning systems and preparedness.</li> <li>• General policy directive to allow subdivision, use and development in urban areas provided natural hazard risk is not increased, but it is to be avoided outside of urban areas unless significant adverse effects can be avoided.</li> <li>• Floodplain provisions for urban areas consider the vulnerability of activities intended to be accommodated by new buildings. Provisions require the redevelopment of sites where existing vulnerable activities are located within the 1% AEP floodplain to minimise the risks from flood hazards, e.g. by locating habitable rooms above flood levels and providing safe evacuation routes from buildings and sites. Less vulnerable activities can locate in the 1% AEP floodplains where the activity can avoid, remedy, or mitigate effects from flood hazards on other properties.</li> </ul>
Thames Coromandel Proposed District Plan - Appeals version 2019	Thames Coromandel District Council	<ul style="list-style-type: none"> <li>• Adopts the risk-based approach developed by GNS Science, that combines the consequence table with likelihood to determine a risk matrix of acceptable, tolerable and intolerable risk. The risk matrix is taken directly from GNS Science, although the intention is to work with communities to review the risk categories.</li> <li>• There is a specific directive that development should be 'future proofed' to allow retreat and/or relocation of structures and buildings where there is a potential future hazard risk in the next 100 years (Policy 1g).</li> <li>• The natural hazards section applies to all natural hazard risks in the District, not just those identified on the Overlay Planning Maps.</li> <li>• Flood mapping is based on modelling of a 1% AEP rainfall event, combined with a spring high tide level, including the effects of a 20% increase in rainfall intensity by 2080 and a 0.5m increase in sea level by 2100.</li> </ul>

Plan	Local Authority	Description of approach
Kapiti Coast District Plan	Kapiti Coast District Council	<ul style="list-style-type: none"> <li>• Takes a precautionary risk-based approach that avoids new development in areas subject to high risk from natural hazards if the risk cannot be mitigated, and allowing a greater level of development in areas subject to lower risk from natural hazards or where the natural hazard has a low probability or long recurrence interval. The approach considers the effects of climate change and considers relocation of existing development subject to hazards worsened by climate change effects.</li> <li>• Flood hazard categories are based on the extent of an estimated 1% AEP flood event.</li> <li>• Fault avoidance areas are identified based on the method proposed in the MfE Active Fault guidelines, that uses Recurrence Interval Class (RIC) and fault complexity.</li> </ul>

(51) These plans were selected because:

- They are recent full plan reviews where the natural hazard provisions have been considered in detail. These plans all take a risk-based approach to the management of natural hazards, albeit all in their own unique way.
- The District Plans all significantly changed how their respective district or city is responding to natural hazards from what was present in their first generation plans.
- When considered collectively, these District Plans contain provisions that address the various natural hazards that affect Upper Hutt City.
- With Christchurch City Council, the community had been impacted by significant earthquakes over the last several years and as a result there was a large public and national interest in this full plan review. There are also parallels with the Upper Hutt Community in that the Upper Hutt Community has also been impacted by a natural hazard in recent time being the Kaikoura Earthquake in 2017. While the impacts of the Kaikoura event were low in the context of Upper Hutt City, it raised the public awareness and knowledge on natural hazards.
- There was a high degree of interest and contention within the plan review process and for some of the District Plans the natural hazard provisions changed considerably through the submission process. Reviewing these plans allowed for a greater understanding of whether there are common community concerns in relation to natural hazard provisions.

(52) A summary of the key findings follows:

- There is no consistent approach to the management of natural hazard risk within the District Plans analysed.
- The most common natural hazards addressed are flood and fault rupture.
- Often District Plans take different approaches to different natural hazards, so there is often no consistency within District Plans around the rule framework pertaining to natural hazards.
- The GNS Science non-statutory guidance is used extensively to inform a risk-based approach to natural hazards within District Plans.

### 4.3.3 Advice from Ngāti Toa Rangatira

(53) Under Clause 4A of Schedule 1 of the RMA local authorities are required to:

- provide a copy of any draft policy statement or plan to any iwi authority previously consulted under clause 3 of Schedule 1 prior to notification;
- allow adequate time and opportunity for those iwi authorities to consider the draft and to supply advice; and
- have particular regard to any advice received before notifying the plan.

(54) As an extension of this s32(4A) requires evaluation reports prepared in relation to proposed policy statements and / or plans to include summaries of:

- all advice received from iwi authorities concerning the proposal; and
- the response to that advice, including any proposed provisions intended to give effect to the advice.

(55) No specific clause 4A advice was received from Te Runanga o Toa Rangatira Inc (Ngāti Toa) or Port Nicholson Block Settlement Trust specific to the proposed provisions evaluated within this report.

### 4.3.4 Consultation Undertaken to Date

(56) In September 2021, targeted consultation was undertaken with property owners that are impacted by the proposed Wellington Fault Overlay (including those that would have the overlay removed from their property) and property owners within the Mangaroa Peat Overlay. A summary of the specific feedback to the proposed Plan Change is contained in Appendix 2 of this evaluation report and includes how the feedback has been responded to in the Plan Change.

(57) In summary, the findings from the consultation undertaken are:

- There were concerns regarding the extent of the Mangaroa Peat Overlay and the accuracy of the mapping;
- There were concerns regarding the impacts of the Wellington Fault Hazard Overlay on property values, insurance, and the ability to build on vacant sites; and
- For a portion of the community, there was an understanding as to why there were rules for the Wellington Fault Overlay.

(58) In response to this feedback, Council undertook the following:

- Visited a number of properties where owners requested site visits to refine the boundary of the Mangaroa Peat Overlay. A number of refinements were undertaken to the eastern boundaries of this Overlay.
- Amended the rules so that they only apply to subdivision within the Mangaroa Peat Overlay (recognising that new buildings and their foundation design are addressed through the Building Act); and
- Adjusted the rule framework to make the construction of residential units on vacant sites within the undefined extent of the Wellington Fault a Controlled Activity.

(59) As part of the feedback, questions were raised regarding the position of the Fault Hazard Overlay within the Turksma Lane area in Kaitoke. As a result, further investigation was undertaken by GNS



Science in relation to the position of the Wellington Fault in this area. This analysis identified the following:

- The position of the Wellington Fault in the Turksma Lane area shifted to the north by approximately 200m
- There is still some uncertainty around the feature shown on LIDAR as to whether it is a fluvial trace or a fault trace. As such, further investigation in this area is required to confirm the nature of this feature. Landowners have been contacted in this area and this investigation is on-going; and
- As a result, the fault hazard overlay in the Turksma Lane Area will no longer form part of this plan change and will be included in a future plan change, once the geotechnical investigations have concluded. This excludes approximately 10 properties from the plan change.

#### 4.4 Summary of the Issues Analysis

(60) Based on the analysis and consultation outlined above the following issues have been identified:

*Table 13: issues Identification and Summary*

Issue	Comment	Response
<p>Issue 1: There are significant risks from a wide variety of natural hazards on existing individuals, communities, businesses, property, and infrastructure.</p>	<ul style="list-style-type: none"> <li>• There are a variety of natural hazard risks in Upper Hutt. They are – high slope hazard, poor ground conditions, flooding and fault rupture.</li> <li>• Historically, some of these hazards have been poorly understood and have not been mapped. Mapping shows that there is varying susceptibility to natural hazards within the community, with some areas being located within high hazard areas through to other areas being in either low or no hazard areas.</li> <li>• If further development is undertaken in areas susceptible to natural hazards, then people and property could be exposed to greater risk.</li> <li>• Council has a responsibility to address all significant natural hazard risks to people and property (Section 6 RMA, RPS and Regional Hazard Management Strategy).</li> <li>• Previous regulatory approaches have been limited to seismic and flood hazards.</li> </ul>	<ul style="list-style-type: none"> <li>• Mapping the extent of the following natural hazards: <ul style="list-style-type: none"> <li>○ High Slope Hazard</li> <li>○ Mangaroa Peat Overlay</li> <li>○ Wellington Fault Line</li> </ul> </li> <li>• Introduce natural hazard objective, policies and rules that respond to the risk of different development forms within the identified natural hazard extents.</li> </ul>
<p>Issue 2: Growth in the district needs to recognise and</p>	<ul style="list-style-type: none"> <li>• Pressure for future growth areas may conflict with areas at risk from natural hazards.</li> </ul>	<ul style="list-style-type: none"> <li>• Mapping the extent of the following natural hazards:</li> </ul>

Issue	Comment	Response
respond to the natural hazard risk.	<ul style="list-style-type: none"> <li>• Growth should not place people, property and infrastructure in areas that have an unacceptable natural hazard risk.</li> <li>• Historically infrastructure may have been placed in locations with unacceptable natural hazard risk and/or not been designed to consider the risk.</li> <li>• Growth needs to consider the natural hazard risk and be designed to appropriately mitigate or avoid the hazard risk.</li> <li>• Infill development in established areas may be increasing the natural hazard risk to people and property.</li> <li>• Infrastructure supporting growth areas should not be located in areas at high risk from natural hazards and/or should be designed to take into account the relevant natural hazard risks.</li> </ul>	<ul style="list-style-type: none"> <li>○ Wellington Fault line</li> <li>○ Mangaroa Peat Overlay</li> <li>○ High Slope Hazards</li> <li>• Introduce natural hazard objective, policies and rules that respond to the risk of different development forms within the identified natural hazard extents.</li> </ul>
Issue 3: Earthworks can increase the risk from natural hazards	<ul style="list-style-type: none"> <li>• Unmanaged earthworks can have adverse effects on health and safety and natural hazards.</li> <li>• On steeper sites unmanaged earthworks can undermine the stability of a slope or increase existing slope instabilities.</li> </ul>	<ul style="list-style-type: none"> <li>• Have objective, policies and rules for earthworks that allow for a reasonable amount of works to occur, without increasing the natural hazard risk in the local area.</li> <li>• When resource consent is triggered for earthworks, include the impacts on the stability of the local environment as one of the matters of discretion.</li> </ul>

## 5 Scale and Significance Evaluation

- (61) Under s32(1)(c) of the RMA, this evaluation report needs to contain a level of detail that corresponds to the scale and significance of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the proposal.
- (62) The following assessment considers the natural hazards provision in relation to eight factors and scores each factor out of 5 in terms of its scale and significance (where 1 is low and 5 is high). This is consistent with MfE's guidance on Section 32 reports. There is a degree of subjectivity about this evaluation, and its primary purpose is to broadly determine the level of analysis required for this topic. It is not intended to be an economic cost-benefit analysis although it will help determine if one is required.

- (63) The Assessment concludes with a summary table that provides a final overall score for the scale and significance of the natural hazard provisions, and therefore the level of analysis required.

**Factor 1: Reason for the Change**

- (64) Council is undertaking a rolling review of the District Plan to meet its statutory requirements and to ensure the plan is addressing resource management issues appropriately. This includes the appropriate implementation of current National Policy Statements and the National Planning Standards gazetted in April 2019. Additionally, it needs to implement Section 6(h) of the RMA, the Regional Policy Statement and have regard to Council plans and strategies.
- (65) Overall, the current approach does not give effect to Section 6(h) of the Act, RPS, nor does it meet the Council's function under s31(1)(a) of the Act.

**Score: 4**

**Factor 2: Resource Management Issues / Problem Definition**

- (66) The management of significant natural hazard risk, (Section 6(h)) is a matter of national importance under the RMA and the RPS. Historically, the Council has not taken a risk-based approach to the management of natural hazards and development has occurred in areas that are at risk from a range of natural hazards. The current approach in the District Plan is not giving effect to Section 6(h) of the Resource Management Act or the RPS.

**Score: 4**

**Factor 3: Degree of Shift from the Status Quo**

- (67) The existing plan provisions are inadequate to meet Council's statutory obligations and only cover a very limited range of natural hazards, over a limited geographic extent and with limited direction or control.
- (68) The proposed provisions take a more holistic approach to the consideration of the natural hazard risk within Upper Hutt City. The proposed provisions give effect to higher order direction and are intended to provide a clearer direction around the management of future natural hazard risk, particularly in terms of ensuring that future development does not significantly increase the risk, when compared to the existing situation.
- (69) The proposed provisions represent a significant change in the approach to the management of natural hazard risk. In particular, the proposed provisions apply to hazards that have not previously been identified in the District Plan (Mangaroa Peat Hazard and High Slope Hazards). Furthermore, the provisions move into a risk-based approach, which is a more nuanced planning approach to address development within areas susceptible to natural hazards. This approach results in more detailed planning provisions and ensures that development responds to the natural hazard and any resulting risk is appropriately addressed.

**Score: 4**

**Factor 4: Who and How Many Will be Affected/Geographical Scale of Effects**

- (70) The proposed Natural Hazard Overlays affect a significant number of properties within Upper Hutt City and as such, the proposed provisions (which relate to the overlays) will also affect many properties. For many properties within the proposed overlays, it will be the first time that development must consider and respond to natural hazard risks. This may be controversial as the timeframes and intervals for natural hazards can be large and many of the property owners and occupiers may not have experienced the impact of the natural hazard(s) and therefore do not agree with the need to control development in respect of the natural hazard(s).

(71) If the proposed provisions are not appropriately targeted, there is the potential for significant economic and social implications. These include:

- Inappropriate development in natural hazards areas may result in the need for public funded (local government) infrastructure to mitigate the natural hazard risk. This can have cost implications in terms of rate increases and taking funding away from other projects;
- The insurance market in NZ has been changing since the Christchurch Earthquake sequence, and the Kaikoura Earthquakes with many insurers moving to a risk-based insurance scheme. It is feasible that inappropriate development in natural hazard zones may not be able to obtain insurance. This has implications ranging from being able to obtain bank funding to purchase a property (banks generally require insurance for mortgages) through to significant effects on personal financial position if the development is damaged or destroyed by a natural hazard.

(72) It is for the aforementioned reason that the proposed provisions score highly in relation to this factor.

**Score: 4**

**Factor 5: Degree of Impact on or Interest from Iwi/Māori**

(73) This factor has a medium score as:

- The proposed natural hazards may impact sites of significance to Māori, or impact sites that are owned by Māori (Te Ture Whenua titles). At the time of preparing this plan change, not all sites of significance to Māori had been identified (these form part of a Heritage and Cultural Plan Change and the evidence base for this is still being prepared). If any of these sites intersect the Well Defined or the Well Defined (extension) components of the Wellington Fault, then the impacts in terms of future development could be significant. However, it is my understanding that there is not a significant number of cultural sites or Te Ture Whenua titles within the Upper Hutt City. As such, the overall number of properties that are significant to Māori that are impacted by the proposed provisions are likely to be limited.
- Careful consideration has been given to this and whether an alternative framework is required to allow for the cultural aspirations of the community to be met. However, this was decided against due to the higher order need to manage significant natural hazard risk and the fact that natural hazards present a threat to life and property. As such, it has been decided to proceed with the proposed framework to ensure that the health and safety of the local Māori community is provided for, while recognising that there is the potential for there to be an impact on potential development rights.

**Score: 3**

**Factor 6: Timing and Duration of Effects**

(74) The effects of the topic provisions will be ongoing from the time any of its provisions become operative.

**Score: 4**

**Factor 7: Type of Effects**

(75) The proposed natural hazard provisions introduce a range of effects including:

- Some properties will have a lost opportunity cost as a result of not being able to be developed due to the risk associated with the natural hazard;

- There will be increased costs for some developments as a result of needing to introduce mitigation to reduce the impacts from natural hazards;
- For some properties there will be an increase in development rights as a result of the revised position of the Wellington Fault and the removal of this hazard overlay from their respective sites.

(76) The nature of the above effects is largely unavoidable due to the need to respond to Section 6(h) of the RMA.

**Score: 4**

**Factor 8: Degree of Risk and Uncertainty**

(77) Whilst the provisions have been drafted to provide certainty through a well-understood approach, there remains a degree of risk arising from:

- Community reaction to the provisions;
- Challenges to the scientific assumptions associated with the mapping of the natural hazard overlays;
- The future role and changes that will arise from economic factors outside of the District Plan such as a natural hazard event or changing insurance markets which may override or introduce new approaches to the management of natural hazard risk beyond those identified in the District Plan.

(78) The above have been off set to an extent by the Council’s community engagement during plan preparation and the development of the Natural Hazard Overlays.

**Score: 4**

**Overall Scale and Significance**

(79) Table 14 Summary of Scale and Significance below lists the factors discussed above and the scores for each factor. The scores are then combined to give a total scale and significance score for the Proposed Plan.

*Table 14: Summary of Scale and Significance*

<b>Factor</b>	<b>Score</b>
1. Reason for Change	4
2. Problem / Issue	4
3. Degree of Shift from Status Quo	4
4. Who and How Many Affected, Geographic Scale of Effects	4
5. Degree of Impact on or Interest from Māori	3
6. Timing and Duration of Effects	4
7. Type of Effect	4
8. Degree of Risk or Uncertainty	4
<b>Total (out of 40)</b>	<b>31</b>

### Total Score Interpretation

0-10 Scale and Significance = Low

11-20 Scale and Significance = Moderate

21-30 Scale and Significance = High

31-40 Scale and Significance = Very High

(80) The overall scale and significance of this proposal has been assessed as being **very** high. This means that this evaluation report needs to contain a very high level of detail and analysis including:

- a detailed planning analysis of zone extent and provisions;
- a robust and detailed evidence base, including reference to relevant technical reports, studies, independent assessments and peer reviews as required;
- consideration of and response to legal comments; and
- evidence of a community and landowner engagement and detailed consideration of feedback.

## 6 Quantification of Benefits and Costs

(81) Section 32(2)(b) requires that, where practicable, the benefits and costs of a proposal are to be quantified.

(82) The table below provides a qualitative assessment of whether the costs or benefits associated with the proposal are high or low. Where this qualitative assessment shows that potential impact of the provisions is high, a quantitative assessment of the costs and benefits of the provisions has been undertaken.

*Table 15: Summary of Benefits and Costs*

Consideration	Assessment		Comment
	Low	High	
The proposal would result in a more restrictive regime than the status quo	-	x	There are currently very few natural hazard provisions within the Operative District Plan. The proposed natural hazard chapters will introduce a range of resource consenting requirements, with some properties in high hazard areas losing potential development opportunities.
Evidence demonstrates that the status quo is resulting in significant adverse effects	-	x	The hazard evidence for Upper Hutt City has been historically limited. As a result, there are a number of communities that are located in areas where there are natural hazard risks, and the development that has been undertaken has not necessarily taken into account these risks. As such, there are a number of existing properties where the occupants, or the structures, could be impacted (some to a significant degree) by differing natural hazard events.

The proposal would result in a significant loss of development opportunity / potential above the status quo		x	Properties that contain Hazard Sensitive Activities and are located in identified High Hazard Areas will lose the ability to intensify or develop further. However, the number of properties within the High Hazard Areas is relatively limited given the small geographic extent of the High Hazard Areas. There will also be additional costs to development for other properties within the Natural Hazard Overlays due to the need to incorporate mitigation measures into developments.
The proposal is likely to result in loss of employment opportunities	x	-	The proposed provisions are unlikely to significantly impact employment opportunities as most high hazard areas (where further development is strongly discouraged) are either properties zoned residential, rural, or recreational. These areas have limited employment opportunities.
The introduction of a more permissive regime that could result in significant adverse effects on s6 matters	x	-	The proposed provisions are consistent with Section 6(h) of the RMA. The proposed provisions take a risk-based approach to the management of natural hazard risks and do not propose a permissive regime to the management of natural hazard risk.
Likelihood of significant indirect or flow-on effects	x	-	The proposed provisions are responding to existing gaps within the District Plan and will help reduce potential flow-on effects associated with the current regime, including: <ul style="list-style-type: none"> <li>• Disruption to people’s lives and wellbeing as a result of developments occurring without appropriate consideration of natural hazard risks and as a result experiencing significant damage or disruption when the natural hazard event occurs;</li> <li>• Reducing the likelihood that developments in the future cannot get insurance due to them being undertaken without appropriate consideration of natural hazards.</li> </ul>
The proportion of the city that is likely to be affected	-	x	Three natural hazards overlays are proposed, which impact on a significant number of properties within the City. The properties most impacted by the proposed provisions are those located on the hill sides, or within the Wellington Fault Overlay. There is a limited number of

			properties within the Mangaroa Peat Overlay.
The level of uncertainty around the proposal, its effects, and the availability of relevant information	x	-	The extents of the natural hazards have been mapped within the District Plan, using best practice, and the provisions have been nuanced. There is little uncertainty in the provisions. As such, it is considered that the overall level of uncertainty within the provisions are low.
The level of base economic information available within the Council	-	x	Given the assessment of the scale and significance of the proposed provisions in section 5 above, specific quantification of the benefits and costs has been undertaken for the purposes of this report and is reflected in the assessment of policies, rules and other methods contained in section 10.
Access to a suitably qualified economic resource within the available timeframe	-	x	

(83) As the qualitative assessment undertaken in Table 16 shows that several of the assessed matters were high, a detailed cost benefit analysis of the proposed provisions was undertaken by Sense Partners. This detailed cost/benefit assessment is contained in Appendix 3, and this forms the evidence base to satisfy this requirement of the s.32 assessment. The cost benefit analysis assesses a range of costs and benefit associated with each of the proposed approaches to managing the differing natural hazards within this plan change. For each hazard, the cost benefit analysis concludes that the benefits arising from the proposed provisions outweigh the associated costs. When the proposed provisions are considered as a collective whole across all the hazards, the benefits were found to exceed the associated costs on a return benefit-cost ratio of 2.73:1.

## 7 Proposed Provisions (Objective, Policies and Rules)

(84) The proposed provisions are set out in Appendix 3. These provisions should be referred to in conjunction with this evaluation report.

(85) In summary, the proposed approach consists of three steps, culminating in the proposed provisions.

### Step 1

(86) The identification and classification of activities based on their sensitivity to natural hazards with respect to the potential risk to life, vulnerability of the activity to natural hazard and potential damage to buildings and structures used for that activity. This step used the Building Importance Category under the Building Code as a starting point to determine whether an activity was a:

- Hazard Sensitive Activity;
- Potentially Hazard Sensitive Activity; or
- Less Hazard Sensitive Activity.

(87) The Building Importance Category recognises that buildings that contain certain activities need to be constructed to a higher standard. Using the Building Importance Categories, those activities that need to be constructed to a high standard (for example emergency facilities) were determined to be sensitive activities, whereas buildings that can be constructed to a lower standard (for example accessory buildings) were considered to be less hazard sensitive activities. This approach is based



upon the Ministry for the Environment’s planning guidance for development of land on or close to active faults (Kerr et al., 2003). A planning lens was then applied to the categorisation of activities to ensure that they aligned with the non-statutory guidance that applies to natural hazards and to ensure that no perverse outcomes would be achieved in terms of risk to life, vulnerability of the activity and property. An example of this is residential units which have been elevated to hazard-sensitive activities due to the potential risk to life and property from this activity from being established in hazard overlays. The proposed categorisation of activities in terms of their sensitivity is set out in the Table below.

*Table 16: Proposed Hazard Sensitivity Classification of Land Use Activities*

Hazard provisions sensitivity classification	Land Use Activities
Hazard Sensitive Activities	Any building that contains one or more of the following activities: <ul style="list-style-type: none"> <li>• Community Facility</li> <li>• Early Childhood Centre</li> <li>• Educational Facility</li> <li>• Emergency Service Facilities</li> <li>• Hazardous Facilities and Major Hazardous Facilities</li> <li>• Healthcare Activity</li> <li>• Kōhanga reo</li> <li>• Marae</li> <li>• Residential Activity</li> <li>• Retirement Village</li> <li>• Research Activities</li> <li>• Visitor Accommodation</li> </ul>
Potentially Hazard Sensitive Activities	Any building that contains one or more of the following activities: <ul style="list-style-type: none"> <li>• Primary production (excluding buildings identified as either Hazard Sensitive or Less Hazard Sensitive Activities)</li> <li>• Commercial Activity</li> <li>• Entertainment Facility</li> <li>• Industrial Activities</li> <li>• Integrated Retail Activity</li> <li>• Large Format Retail Activity</li> <li>• Office Activities</li> <li>• Retail Activities</li> <li>• Rural Industrial Activities</li> <li>• Service Stations</li> </ul>
Less Hazard Sensitive Activity	Any building that contains any activity not identified as a Hazard Sensitive Activity or Potentially Hazard Sensitive Activity, and includes: <ul style="list-style-type: none"> <li>• Accessory buildings used for non-habitable purposes</li> <li>• Event overnighting</li> <li>• Parks Facilities</li> <li>• Parks Furniture</li> <li>• Buildings associated with temporary activities</li> <li>• Structures that are non-habitable and are not used as places of employment.</li> </ul>

(88) The sensitivity table allows for the consideration of the change in risk because of differing activities establishing themselves within a hazard area. This means that if a new sensitive activity relocates into an existing building with an identified natural hazard overlay, then the potential risk to that activity from being present in the hazard area would need to be considered.

## Step 2

(89) The second step mapped and ranked the hazard return periods to determine where they represented a low, medium, or high hazard. The differing hazard areas are identified in the tables below:

*Table 17: Natural Hazard Ranking*

Natural Hazard Overlay	Respective Hazard Ranking
Wellington Fault Rupture Zone (well-defined or well-defined extension areas)	High
Wellington Fault Rupture Zone (poorly constrained or uncertain constrained areas)	Medium
High Slope Hazard Area	Medium
Mangaroa Peat Overlay	Medium

(90) These hazard rankings have been informed by a range of documentation including:

- Non-Statutory Guidance (for example the fault ruptures areas are from MfE guidance on planning for development of land on or close to active faults)
- Expert advice (for example geotechnical engineers) around the Mangaroa Peat and High Slope Hazard Overlays, and
- Higher order documentation (for example the RPS which provides some context for high hazard areas in the Wellington Region).

## Step 3

(91) A rule matrix has been prepared that combines the sensitivity of the activity with the hazard ranking, with an increasing activity status as the sensitivity of the activity and the potential severity of the hazard increases. The activity status proposed is outlined in Table 18. It should be noted that this is a generalised table and that some of the proposed rules depart from this generalised approach due to hazard-specific reasons or other issues that need to be considered.

*Table 18: Activity Status for Different Sensitivity Activities Across the Hazard Zones*

	Hazard Ranking		
	High	Medium	Low
<b>Hazard Sensitive Activity</b>			
<b>Potentially Hazard Sensitive Activity</b>			
<b>Less Hazard Sensitive Activity</b>			

### Key

Colour	Activity Status
	Permitted
	Restricted Discretionary
	Non-Complying

- (92) The proposed objective, policies and rules seek to ensure the following outcomes:
- Avoid development for Hazard Sensitive Activities and Potentially Hazard Sensitive Activities in the High Hazard Area (non-complying activity). To be able to get through the gateway tests, an applicant would need to demonstrate that the risk to life and property from the natural hazard is low. There may be site specific reasons or specific design solutions which may make it appropriate for a hazard sensitive activity to locate in the High Hazard Area. However, it is expected that this would be the exception; and
  - Allow for Hazard Sensitive Activities and Potentially Hazard Sensitive Activities in the Medium Hazard Area providing appropriate mitigation measures are incorporated into the proposal (Restricted Discretionary Activity). Within a resource consent process, an applicant would need to demonstrate that the risk to life and building damage from the natural hazard is low. There would be more instances where this could be acceptable due to the mitigation measures proposed, hence the restricted discretionary activity pathway, which allows for the consideration of these matters.
  - All for Less Hazard Sensitive Activities as a permitted activity in the Medium and High Hazard Areas.
- (93) Small scale additions to buildings for Hazard Sensitive Activities and Potentially Hazard Sensitive Activities are provided for in all Hazard Areas, subject to mitigation measures to reduce the potential damage, and evidence that the risk to life will not be increased by the proposal.
- (94) The subdivision process takes a similar approach as the land use. With subdivisions, the activity status is determined by the location of the building platform. If the building platform is located in a natural hazard overlay then the natural hazard provisions are triggered. The activity status of the subdivisions is determined by the following factors:
- The intended activity on the building platform as provided for by the resource consent application or, if no activity is proposed as part of the application, by the role and function of the zone; and
  - The hazard overlay that the building platform is located within.
- (95) The activity status for the subdivision relates to the sensitivity of the activity in the same way as outlined above for land use applications.
- (96) The exception to the above framework is the Mangaroa Peat Overlay. The purpose of this overlay is to ensure that buildings constructed within this area have a foundation design that is appropriate for the poor ground conditions. For the construction of new buildings, this matter is addressed through the Building Code and the Building Act 2004 process. Under this process, new buildings need to demonstrate that their foundations are appropriate for the ground conditions upon which they are located. In instances of poor ground conditions, the foundations of the building are required to be designed by an engineer. To prevent a duplication of process, no land use rules are proposed for this hazard overlay. However, it is still appropriate to have a subdivision rule pertaining to the Mangaroa Peat Overlay. This is to ensure that any new lots created in this area either have an appropriate building platform for any future buildings or to ensure that an appropriate engineer solution exists that will allow for a building to be constructed on the site. This is to prevent instances where lots may be created, but the ground conditions are such there is no practical foundation design available.

## Earthworks

(97) For the most part, the earthworks provisions that apply city wide and to infrastructure also apply within the natural hazard overlays. The exception is for the High Slope Hazard Overlay. In this overlay any earthworks for the purpose of a building platform requires resource consent. This is to ensure that earthworks that are associated with buildings, that have people living or working within them, are undertaken in a manner that does not result in slope instability, which could impact the safety of people or property.

## 7.1 Definitions

(98) The following definitions are proposed by the plan change:

*Table 19: Proposed Definitions*

Hazard provisions sensitivity classification	Land Use Activities
Hazard Sensitive Activities	Means any building that contains one or more of the following activities: <ul style="list-style-type: none"> <li>• Community Facility</li> <li>• Early Childhood Centre</li> <li>• Educational Facility</li> <li>• Emergency Service Facilities</li> <li>• Hazardous Facilities and Major Hazardous Facilities</li> <li>• Healthcare Activity</li> <li>• Kōhanga reo</li> <li>• Marae</li> <li>• Residential Activity</li> <li>• Retirement Village</li> <li>• Research Activities</li> <li>• Visitor Accommodation</li> </ul>
Potentially Hazard Sensitive Activities	Means any building that contains one or more of the following activities: <ul style="list-style-type: none"> <li>• Buildings associated with primary production (excluding Residential Activities or buildings identified as Less Hazard Sensitive Activities)</li> <li>• Commercial Activity</li> <li>• Entertainment Facility</li> <li>• Industrial Activities</li> <li>• Integrated Retail Activity</li> <li>• Large Format Retail Activity</li> <li>• Office Activities</li> <li>• Retail Activities</li> <li>• Rural Industrial Activities</li> <li>• Service Stations</li> </ul>
Less Hazard Sensitive Activity	Means any building that contains any activity not identified as a Hazard Sensitive Activity or Potentially Hazard Sensitive Activity, and includes: <ul style="list-style-type: none"> <li>• Accessory buildings used for non-habitable purposes</li> <li>• Event overnighting</li> <li>• Parks Facilities</li> <li>• Parks Furniture</li> <li>• Buildings associated with temporary activities</li> <li>• Structures that are non-habitable and are not used as places of employment.</li> </ul>

## 7.2 Non-Notification Clauses

(99) The following non-notification clauses are included in the proposed natural hazards chapter:

Table 20: Non-notification Clauses

Rule	Preclusion	Reason
<b>SUB-GEN R3</b> - Subdivision that creates a building platform for a Potentially Hazard Sensitive Activities and Hazard Sensitive Activities in the Mangaroa Peat Overlay.	Precluded from Public and Limited Notification	This rule seeks to ensure that: <ul style="list-style-type: none"> <li>Subdivision within the Mangaroa Peat Overlay considers the poor ground conditions and ensures that there is either a suitable building platform for future buildings or that appropriate mitigation measures can be achieved.</li> <li>Achieving these outcomes will not result in wider environmental effects that are more than minor, or additional effects onto neighbouring properties and therefore these activities can be precluded from being either publicly or limited notified.</li> </ul>

## 8 Objectives Evaluation

### 8.1 Introduction

(100) This section of the report evaluates the proposed objective as to whether it is the most appropriate to achieve the purpose of the Act.

(101) For this evaluation the following criteria form the basis for assessing the appropriateness of the proposed objective:

1. Relevance
2. Usefulness
3. Reasonableness
4. Achievability

## 8.2 Evaluation of Objective NH-O1

(102) While not specifically required under s32 of the RMA, it is appropriate to also consider alternative objectives to those currently included in the Proposed Plan Change to ensure that the proposed objective is the most appropriate to achieve the purpose of the RMA.

(103) For this evaluation, the Council has considered the following:

- The proposed objective; and
- The status quo (existing objective).

(104) No reasonable alternative objectives could be identified and therefore the evaluation has been confined to the proposed objective and the status quo.

Table 21: Evaluation of Objective NH-O1

Evaluation of Objective NH-O1		
<b>Proposed Objective:</b>		
NH-O1 - Subdivision, use and development within the Natural Hazard Overlays does not significantly increase the risk to life or property.		
General intent:		
The proposed objective seeks to ensure that development within areas prone to natural hazards requires consideration to ensure that the risk to life and property does not significantly increase. This is consistent with the outcomes sought under higher order direction.		
Other potential objective		
Status quo: Objective 14.3.1 - The avoidance, remedying or mitigation of the adverse effects of natural hazards on the environment.		
Other relevant objectives in the Plan:		
N/A		
	Preferred objective	Status quo
<i>Relevance:</i>		
Addresses a relevant resource management issue	<p>Yes - Issues 1 and 2.</p> <p>The proposed objective gives effect to Part 2 of the RMA, in particular:</p> <ul style="list-style-type: none"> <li>• Section 5, as it provides for the sustainable management of the city by ensuring developments are designed to either avoid or mitigate the</li> </ul>	<p>No - The status quo takes an effects based approach to the management of natural hazards. Section 6(h) of the Act requires for there to be a risk based approach to natural hazards. As such, the existing objective does</p>

<b>Evaluation of Objective NH-O1</b>		
	<p>impacts of the natural hazard, which in turn provides for the social, economic and cultural well-being of the local community as well as their health and safety.</p> <ul style="list-style-type: none"> <li>Section 6(h) - as it sets the risk outcomes that are sought to be achieved from future development in the natural hazard overlays.</li> </ul>	not align with the approach that is required to be undertaken by the Act and by higher order direction (for example the RPS).
Assists the Council to undertake its functions under s 31	Yes - Section 31(b)(i) The proposed objective is encompassing as it applies to a variety of natural hazards, and also applies to natural hazard risk, thereby giving greater effect to Section 31(b)(i) than the existing situation.	Yes (but limited) - The existing objective only applies to a variety of nature hazards but does not take a risk based approach and therefore is somewhat limited.
Gives effect to higher level documents	Yes - The higher order documents (Section 6(h) RMA and RPS) require a risk-based approach to the management of natural hazards (as previously identified). The proposed objective takes a risk-based approach to the management of natural hazards and sets the level of acceptable risk to be achieved from future development.	No - The existing objective requires a consideration of the effects from developing in natural hazard overlays. The current higher order direction requires a risk based approach. As such, the current objective is not giving effect to the current higher order direction.
<i>Usefulness:</i>		
Guides decision-making	Yes – outlines the risk outcomes sought for development within the Natural Hazards Overlays, which will guide decision making when considering a resource consent application under s104.	Yes (but limited) – The existing objective does guide decision making. However, it guides this decision making in terms of the effects of a development within a natural hazard overlay, as opposed to the risk from development in a natural hazard overlay. The consideration of risk is quite a different consideration to the effects of a development, and all higher order documentation requires a consideration of risk. As such, the guidance provided by the existing objective is inconsistent with approach required by higher order documentation.
Meets best practice for objectives	Yes – outlining risk outcomes for development within natural hazard overlays is in line with national best practice.	No – an effects based assessment is considered to not represent best practice. Current best practice for natural hazard requires a risk-based assessment to determine whether a development within a natural hazard overlay is appropriate.
<i>Reasonableness:</i>		
Will not impose unjustifiably high costs	Yes - The proposed objective will impose additional costs on the community as there will be lost opportunity costs (as some sites will not be able to be developed further) and other developments will need to incorporate	Yes (but limited) - The existing objective only apply to limited mapped natural hazard extents. As such, they do not impose unjustifiably high costs on the community. However, given the limited applicability, they do

<b>Evaluation of Objective NH-O1</b>		
on the community / parts of the community	mitigation measures to ensure that the impacts from natural hazards are reduced to an acceptable level. However, this needs to be balanced in the consideration of changing insurance markets (where developments in high risk areas may not be able to obtain insurance in the future) and the costs associated with loss of life, injury and damage to buildings and disrupted communities as a result of damage from natural hazard events. Overall, it is considered that the proposed objective will not give rise to unjustifiability high costs on the community, though some properties will be more impacted than others.	have the potential to impose costs on the community from not appropriately controlling development in areas of natural hazard risk. This means that future development could be at risk from natural hazards or lose the ability to retain insurance (which has flow on effects to mortgages and property values). As such, it can be argued that maintaining the status quo passes on unjustifiability high costs to future generations through inaction around natural hazard risk management.
Acceptable level of uncertainty and risk	Yes – the objective provides for a clearer regulatory framework for the management of the subdivision, use and development within the Natural Hazard Overlays. This provides the community, developers and stakeholders with greater direction and clarity on how change will be managed and what outcomes need to be met for development to proceed.	No – As previously identified above, the existing objective requires the consideration of the effects of a development within a natural hazard overlay, as opposed to the risk from development in a natural hazard overlay. The consideration of risk is quite a different consideration to the effects of a development, and all higher order documentation requires a consideration of risk. As such, the guidance provided by the existing objective creates a level of uncertainty as it directs an outcome the is different to higher order direction.
<i>Achievability:</i>		
Consistent with identified tangata whenua and community outcomes	<p>There has not been strong support for the proposed approach when consultation was undertaken with the draft provisions. However, changes have been made to the mapping and provisions in response to the community feedback that was received. These changes should address some of the concerns raised.</p> <p>It is recognised that there are potential significant cultural costs to be borne by local iwi if development was undertaken on hazard prone land and that is of significance to Māori, or impact sites that are owned Māori (Te Ture Whenua titles). Careful consideration was given to whether an alternative framework was required to allow for the cultural aspirations of these communities to be met. However, this was decided against due to the higher order direction and that being more permissive in the natural hazard overlays could put life and future developments at considerable risk, which would result in worse outcomes for these communities in the longer term.</p>	There has been no feedback from the community on the existing objective.



Evaluation of Objective NH-O1		
Realistically able to be achieved within the Council's powers, skills and resources	Land use planning decisions reflect one of the fundamental tools that councils have available to manage the risks associated with natural hazards and it is a fundamental consideration under the RMA. As such, the proposed objective can be realistically achieved within Council's power, skills and resources.	The status quo is within the power of the Council and they can also rely on higher order documentation to manage natural hazards when resource consents are sought.

### 8.2.1 Summary

- (105) Having assessed the status quo, and the proposed objective, it is considered that the proposed objective is the most appropriate way to achieve the purpose of the Act and to give effect to higher order direction. The proposed objective takes a risk-based approach to the management of development and natural hazards and sets the outcomes that are expected from development within the natural hazard overlays. The proposed objective uses wording that is consistent with Section 6(h) of the RMA, and RPS. The objective also supports the Council to carry out its functions under s31(1)(b) of the Act.
- (106) The proposed objective describes the outcome that development within a natural hazard overlay needs to achieve. The objective also recognises that it is not possible to result in no increase in risk, as any development within a natural hazard overly always has a level of residual risk.
- (107) It is considered that the status quo objective is not consistent with higher order documentation and is not the most appropriate option to give effect to the RMA.

## 9 Policies and Rules Assessment

### 9.1 Introduction

- (108) This section of the report evaluates the proposed policies and rules, as they relate to the proposed objective.
- (109) Along with the proposed provisions, the Council has also evaluated the status quo as an alternative option for achieving the objective.

### 9.2 Evaluation method

- (110) For each potential approach an evaluation has been undertaken relating to the costs, benefits and the certainty and sufficiency of information (as informed by section 4 of this report) in order to determine the effectiveness and efficiency of the approach, and whether it is the most appropriate way to achieve the relevant objective(s).
- (111) This evaluation is contained in the sections that follow.

### 9.3 Provisions to achieve Objective NH-O1

- (112) For the purpose of this evaluation, the Council has considered the following potential options:
1. The proposed provisions
  2. The status quo
- (113) For the purposes of this assessment, the existing flood hazard provisions will not be assessed. This is because this proposed plan change is not going to change the existing flood hazard provisions. This assessment will concentrate of fault hazards, poor ground conditions and high slope hazards and how the existing District Plan and the proposed natural hazard provisions respond to these matters.

Table 22: Evaluation of Provisions to Support NH-O1

<b>Evaluation of Provisions to Support NH-O1</b>			
<b>NH-O1 - Subdivision, use and development within the Natural Hazard Overlays does not significantly increase the risk to life or property.</b>			
<b>Proposed approach to provisions</b>	<b>Costs</b>	<b>Benefits</b>	<b>Risk of Acting / Not Acting if there is uncertain or insufficient information about the subject matter of the provisions</b>
<p><b><u>Policies:</u></b></p> <p>NH-P1</p> <p>NH-P2</p> <p>NH-P3</p> <p>NH-P4</p> <p>NH-P5</p> <p>NH-P6</p> <p>NH-P7</p> <p><b><u>Rules:</u></b></p> <p>NH-R1</p> <p>NH-R2</p> <p>NH-R7</p> <p>NH-R9</p> <p>NH-R10</p> <p>NH-R23</p> <p>SUB-GEN-R3</p> <p>EW-R9</p>	<p><b><i>Environmental</i></b></p> <p>No direct or indirect environmental costs have been identified with the proposed provisions.</p> <p><b><i>Economic</i></b></p> <p><u>Direct costs</u></p> <p>The following direct economic costs have been identified:</p> <ul style="list-style-type: none"> <li>• There will be increased costs to developments as a result of the need to incorporate mitigation measures into some development forms. These costs may not be significant in the context of the overall development costs as many of the proposed measures would include matters such as:                             <ul style="list-style-type: none"> <li>○ Setting buildings back from high hazards areas; and</li> <li>○ Incorporating design measures to reduce the impacts from natural hazards.</li> </ul> </li> </ul> <p>These measures are easily able to be incorporated into developments at the time of construction, without presenting significant additional costs.</p>	<p><b><i>Environmental</i></b></p> <p>No direct or indirect environment benefits have been identified with the proposed provisions.</p> <p><b><i>Economic</i></b></p> <p><u>Direct benefits</u></p> <p>The direct economic benefits derived from the proposed provisions include:</p> <ul style="list-style-type: none"> <li>• Reducing the damage to future properties and buildings from natural hazard events as a result of incorporated mitigation measures.</li> <li>• Likely ability to retain insurance cover for future properties as they have been able to be designed to mitigate the risks from natural hazards;</li> <li>• Reduced costs to recover from natural hazards (such as clean-up, repairing damage, loss of productivity);</li> <li>• Communities that experience less damage in a natural hazard event can recover faster. This ensures significantly reduced economic impacts from when a natural hazard event occurs as the loss of productivity and employment opportunities are not as large or significant.</li> </ul>	<p>It is considered that there is certain and sufficient information on which to base the proposed policies and methods as:</p> <ul style="list-style-type: none"> <li>• The expert assessments provided show that there are several natural hazards that affect the City and that some of the potential impacts represent a significant risk to life and property.</li> <li>• The expert assessments also show that for each natural hazard, the severity of the hazard varies within each overlay. As such, a nuanced approach is required where in high hazard areas development generally needs to be avoided, whereas in low and medium hazard areas development should be able to proceed providing appropriate mitigation measures are implemented to address the risk from the hazard.</li> <li>• Higher order guidance (Section 6(h) and RPS) provides direction on how natural hazard risk needs to be managed and addressed within District Plans. The proposed provisions are consistent with this higher order direction;</li> </ul>

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Maps – Mapping the various hazard extents.	<ul style="list-style-type: none"> <li>There will be a greater requirement to go through the resource consent process when compared to the status quo. As such, there will be the direct costs associated with this process.</li> <li>For some property owners there will be a lost opportunity cost from not being able to develop their property due the hazards present on the site. On an individual property basis, these lost opportunity costs could be significant.</li> </ul> <p><u>Indirect costs</u></p> <ul style="list-style-type: none"> <li>No indirect costs have been identified</li> </ul>	<p><u>Indirect benefits</u></p> <ul style="list-style-type: none"> <li>Potential fewer future costs to respond to future natural hazard events as they have been planned for. This has the potential for reduce the rates of insurance premiums increases and, reduced local government rates increases (to pay for mitigation to reduce the impacts from natural hazards);</li> <li>Dwelling prices may retain their values as the result of being able to retain insurance for longer.</li> </ul>	<ul style="list-style-type: none"> <li>The proposed provisions allow Council to undertake its function under Section 31(b)(i) of the RMA;</li> <li>New Zealand has experienced a significant number of large natural hazard events in the last decade (Christchurch Earthquake Sequence, Kaikoura Earthquake, Gisborne Floods, Dunedin Floods, West Coast Floods and Southland Floods). There have been significant social and economic costs from these events. Some of these costs could have been avoided if there had been better recognition of natural hazard risks when some of the impacted communities were developed. The proposed provisions seek to ensure that future development is undertaken in a manner to ensure that these future social and economic costs do not continue to increase.</li> <li>The proposed subdivision provisions speak directly to Section 106(1) and (1a) of the RMA, which gives the ability for Councils to decline subdivision applications if there is a Significant Natural Hazard Risk. This allows for a more consistent and transparent consideration of subdivision applications than the existing situation.</li> </ul>
	<p><b>Social</b></p> <p>No direct or indirect social costs have been identified with the proposed provisions.</p>	<p><b>Social</b></p> <p><u>Direct benefits</u></p> <p>The risk from natural hazard events will not increase significantly when compared to the existing situation. As such, purchasers of properties that are located in natural hazard overlays should have mitigation measures built in to ensure that the development is not significantly impacted by future natural hazard events up to the identified design level. This will reduce the potential for future social costs such as stress, strain on mental health, illness and loss of workdays.</p> <p>The construction of buildings that respond to the natural hazard risk will make them less susceptible to damage during a natural hazard event, therefore increasing the safety of the occupants, and</p>	

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		<p>reducing the social impacts that come from natural hazard events.</p> <p><u>Indirect benefits</u></p> <p>Lower social economic groups have the least ability to recover from natural hazard events due to the limited resources that they have available to them to recover after an event. The proposed provisions will ensure that future housing that is intended to accommodate lower social economic groups is designed to take into account natural hazard risk. This will have the indirect benefit of ensuring that this sector of society is not disproportionately affected by future natural hazard events.</p>	
	<p><b><i>Cultural</i></b></p> <p><u>Direct costs</u></p> <p>It is recognised that the proposed provisions could impact on tangata whenua aspirations to further develop their land within Upper Hutt, particularly if the land is located within the Well Defined or Well Defined Extension of the Wellington Fault Overlay. This has the potential to have a cultural cost in terms of the local iwi not being able to meet their cultural needs, if they own land that is impacted by these aspects of the Wellington Fault Overlay.</p> <p>In terms of the High Slope Hazard and the Mangaroa Peat Overlay, the proposed provisions could result in additional costs to development land that is of significance to Māori, or impact sites that are owned Māori (Te Ture Whenua</p>	<p><b><i>Cultural</i></b></p> <p>No direct or indirect cultural benefits have been identified with the proposed provisions.</p>	

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	<p>titles). This may result in the cultural aspirations of this land being limited through additional costs.</p> <p><u>Indirect costs</u></p> <p>No indirect cultural costs have been identified with the proposed provisions.</p>		
<b><u>Effectiveness and efficiency</u></b>	<p><b><i>Effectiveness</i></b></p> <p>The proposed provisions are considered to be the most effective in achieving the proposed objective because:</p> <ul style="list-style-type: none"> <li>• They give effect to higher order direction (Section 6(h) and RPS), which the proposed objective responds to;</li> <li>• The proposed provisions are for three natural hazards that have the potential to have a significant impact on Upper Hutt City;</li> <li>• The proposed provisions introduce a nuanced approach to the management of natural hazard risk and development, where the activity status of the consent and the resulting direction provided within the policy is directly relative to the risk presented by the development;</li> <li>• The proposed provisions take a consistent approach across the various natural hazards. This approach is also consistent between differing development typologies. This means that subdivisions for the purposes of accommodating residential dwellings in natural hazard overlays will need to go through the same considerations as constructing a second dwelling (i.e. there is no loophole to work around the provisions); and</li> <li>• The proposed policies and rules will ensure the natural hazard risk in relation to fault hazards, slope instability of poor ground conditions will not increase as a result of either discouraging development in high hazard areas or by requiring mitigation measures to address the risk from the natural hazard.</li> </ul>	<p><b><i>Efficiency</i></b></p> <p>The proposed provisions are considered to be the most efficient in achieving the proposed objective because:</p> <ul style="list-style-type: none"> <li>• They give effect to higher order direction (Section 6(h) and RPS) through a clear, transparent and consistent framework that is located within the District Plan.</li> <li>• While the proposed provisions will result in some additional economic costs, it is considered that the resulting benefits to future occupants and the recovery of the City following a natural hazard event outweigh these costs. It is also noted that the additional costs to a development to incorporate mitigation measures into the design are often considerably less than the costs that result from damage (or repeated damage) from a natural hazard event.</li> <li>• The use a framework that is consistent with other councils in the region (namely the proposed Porirua District Plan). As such, the framework is known and understood by the development community.</li> <li>• It is recognised that there are potential significant cultural costs to be borne by local iwi if development was undertaken on land that is of significance to Māori, or impact sites that are owned Māori (Te Ture Whenua titles). Careful consideration was given to whether an alternative framework was required to allow for the cultural aspirations of these communities to be met. However, this was decided against due to the higher order direction and that being more permissive in the natural hazard overlays could put life and future developments at considerable</li> </ul>	

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		risk, which would result in worse outcomes for these communities in the longer term.
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**Alternative approach to provisions (Status Quo) - Objective 14.3.1 - The avoidance, remedying or mitigation of the adverse effects of natural hazards on the environment.**

	Costs	Benefits	Risk of Acting / Not Acting if there is uncertain or insufficient information about the subject matter of the provisions
<p><b><u>Policies:</u></b></p> <p>NH-P1 NH-P2</p> <p>It is recognised that NHP3 – NH-P9 applies to flood hazards which do not form part of this plan change so an assessment of these policies has not been included as they are outside the scope of this plan change.</p> <p><b><u>Rules:</u></b></p> <p>NH-13 Rules NH R1 – NH-R12 and NH-R14- NH-20 pertain to flood hazard that do not form part of this plan</p>	<p><b><i>Environmental</i></b></p> <p>No direct or indirect environmental costs have been identified with the existing provisions.</p> <p><b><i>Economic</i></b></p> <p><u>Direct costs</u></p> <p>The existing District Plan provisions only address fault rupture and flood hazards. The existing District Plan provisions do not consider slope instability or areas with poor ground conditions. As a result, development within these areas will potentially increase risk with time. When a natural hazard event occurs, the impact on the communities will be greater when compared to the proposed provisions (due to more exposure) and the direct economic costs include:</p> <ul style="list-style-type: none"> <li>• More individual property owners being impacted by natural hazard events as a result of increased development occurring in natural hazards zones without any consideration of the natural hazard impacts and the costs associated with recovering, repairing damage; replacing</li> </ul>	<p><b><i>Environmental</i></b></p> <p>No direct or indirect environmental benefits have been identified with the existing provisions.</p> <p><b><i>Economic</i></b></p> <p><u>Direct benefits</u></p> <p>The District Plan is largely absent in its natural hazard provisions pertaining to high slope hazards and the Mangaroa Peat Overlay and therefore the one direct economic benefit is that there are no costs associated with having to build in mitigation measures into developments to reduce natural risks. This benefit has only been realised by people who have undertaken development in this area and is not a wider economic benefit.</p> <p>The existing fault hazard provisions allow for sites which have the fault line located within their confines to be intensified without the need to implement mitigation measures allowing for landowners to realise economic value from their properties. For some individual properties the realised benefits could be significant due to the</p>	<p>It is considered that there is certain and sufficient information on natural hazards. It is considered the risk of not acting and retaining the status quo are significant for the following reasons:</p> <ul style="list-style-type: none"> <li>• The research undertaken to inform the natural hazard provisions shows that Upper Hutt City is susceptible to several natural hazards. The current provisions do not address these natural hazards and as such development could still occur in these areas with little or no regard to the natural hazard risk, unless identified through a resource consent process.</li> <li>• The District Plan provisions would remain inconsistent with higher order direction (Section 6(h), and the RPS), and the social and economic risk to the community from natural hazards as a result of development occurring in areas susceptible to natural hazards, with no mitigation measures, will continue increase.</li> </ul>

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<p>change so an assessment of these rules) has not been included as they are outside the scope of this plan change.</p> <p><b>Other Methods:</b></p> <ul style="list-style-type: none"> <li>• Annual Plan</li> <li>• Code of Practice</li> <li>• Long term plan</li> </ul>	<p>furnishings and rebuilding as a result of damage from a natural hazard event.</p> <ul style="list-style-type: none"> <li>• Increased insurance premiums or loss of insurance for individual properties that are at high risk of being impacted by future natural hazard events.</li> </ul> <p>The existing fault hazard provisions have the direct economic cost of that they could prevent sites from being developed. This could result in lost opportunity costs for owners of the properties.</p> <p>The District Plan does not have the Wellington Fault position accurately shown based on the existing understanding of where the fault is located. As such, there are costs associated with applicants on the properties where the fault is incorrectly mapped, having to go through the resource consent process if they wish to undertake development on their site.</p> <p><u>Indirect costs</u></p> <p>Indirect economic costs associated with the existing provisions include:</p> <ul style="list-style-type: none"> <li>• Reduced productivity arising from disruption. If businesses are impacted, then this can reduce economic growth and employment options.</li> <li>• Increased insurance costs (potentially) being passed through the market (all properties) to recover the settlements that have been made (or loss of insurance for properties in similar</li> </ul>	<p>value of land (several hundreds of thousands of dollars).</p> <p><u>Indirect benefits</u></p> <p>No indirect economic benefits have been identified with the existing provisions.</p>	<ul style="list-style-type: none"> <li>• The existing District Plan provisions are resulting in an increase in risk from areas with a risk of slope instability and poor ground conditions with time as they currently have little consideration of natural hazards. As such, the status quo is not a realistic option and new provisions (as proposed) are required to address natural hazard risk within the City;</li> <li>• There will be increased community disruption and economic costs borne by affected properties owners and communities from future natural hazard events.</li> </ul>



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	<p>situations as those that were impacted which has implications for house prices); and</p> <ul style="list-style-type: none"> <li>• Potential reduction in time of house prices as a result of inability to obtain insurance or insurance premiums being too high (banks require insurance to settle on property transactions).</li> </ul>		
	<p><b>Social</b></p> <p><u>Direct costs</u></p> <p>The existing provisions have the following direct social costs:</p> <ul style="list-style-type: none"> <li>• There are increased social costs associated with the time for people and communities to recover from natural hazard events. This includes stress, strain on mental health, illness and loss of workdays due to repairing damage. This cost is potentially increasing because of increased development with little or no consideration to natural hazards occurring in the natural hazard overlays.</li> <li>• There can be a loss of community connectiveness as people and businesses move out of impacted communities.</li> </ul> <p><u>Indirect costs</u></p> <p>No indirect social costs have been identified with the existing provisions.</p>	<p><b>Social</b></p> <p><u>Direct benefits</u></p> <p>The existing fault hazard provisions do have some social benefits in that they have required a consideration of the fault hazard, when making resource consent decisions. This has allowed for mitigation measures to be incorporated into developments to address the consequences from fault rupture.</p> <p><u>Indirect benefits</u></p> <p>No indirect social benefits have been identified with the existing provisions.</p>	
	<p><b>Cultural</b></p>	<p><b>Cultural</b></p>	

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	No direct or indirect cultural costs have been identified with the existing provisions.	No direct or indirect cultural benefits have been identified with the existing provisions.	
<b><u>Effectiveness and efficiency</u></b>	<p><b><i>Effectiveness</i></b></p> <p>The provisions (policies and rules) are considered to not be the most effective means for achieving the objective for the following reasons:</p> <ul style="list-style-type: none"> <li>• They do not give full effect to higher order direction (Section 6(h), and RPS);</li> <li>• They only apply to a limited number of natural hazards (flooding and seismic hazards) and do not address all the key natural hazards that affect the City;</li> <li>• The existing Wellington Fault Overlay is incorrectly mapped. As such, there are properties unnecessary burden by the fault hazard provisions. Conversely, there are properties that would be impacted by fault hazards that do not have the overlay currently present on their respective site. This means that development can occur on these sites, without little consideration of the fault hazard.</li> <li>• Development can occur in the newly identified areas prone to natural hazards without the need for resource consent. As such, the overall risk from natural hazards to the City is increasing overtime;</li> <li>• Council is having to rely on other pieces of legislation (e.g. Building Act 2004 and CDEM Act 2002) to try and address the risks associated with natural hazards. However, this is less effective than addressing the natural hazard risk at resource consent stage and it means not all relevant natural hazards are being addressed.</li> </ul>		<p><b><i>Efficiency</i></b></p> <p>The status quo is considered to not be the most efficient means for achieving the objective for the following reasons:</p> <ul style="list-style-type: none"> <li>• it does not give effect to higher order direction (Section 6(h), and RPS). This means that the resource consent process must be used to give effect to this higher order documentation. This can result in non-compliances that have no linkages to the higher order documentation, but elevate the application to discretionary or higher status, being used as levels to allow for the consideration of the higher order requirements. This is a very opaque, unclear process that transfers significant costs onto applicants, is inconsistently applied and results in developments being designed to the lower consenting thresholds (permitted – restricted discretionary activity status) to prevent this from occurring (even though the overall environmental outcomes may be poorer by designing to a lower activity status).</li> <li>• While the status quo does have some economic and social benefits, these are often realised by individuals within the short to medium term. When a natural hazard event occurs, there is often a significant transfer of costs from those who undertook the development on to the current property owners and the wider community. These costs can be significant and would outweigh the economic benefits derived.</li> <li>• It is difficult to find natural hazard information that is relevant for the City. Currently, people interested in discovering this information must approach several different organisations to obtain this information (for example Wellington Water and GWRC). For people who are not familiar with these organisations and their roles, it is easy for hazard information to be overlooked which can complicate projects (as they may need to be</li> </ul>

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		altered after a detailed design has been undertaken, thereby adding costs to projects).
<b>Overall evaluation</b>	<p>Having considered the proposed provisions and the status quo, it is considered that the proposed provisions are the most appropriate way to achieve the objective. The proposed provisions get more restrictive as the sensitivity of the activity and the risk from natural hazards increases, thereby ensuring that a nuanced approach to the management of natural hazard risk occurs. The proposed provisions give effect to high order direction and provide a clear framework for the consideration of development within natural hazard overlays. This framework has several economic and social benefits which are considered to outweigh the resulting costs. The status quo however is ineffective and inefficient, and does not give effect to higher order direction. The existing provisions allow for developments to occur within areas that are susceptible to natural hazard risk with little consideration of addressing the resulting risk. As a result, the risk profile to the City from development in areas susceptible to natural hazard overlays is slowly increasing, which has significant potential future economic and social costs, with very little resulting benefits. It is therefore considered that the status quo is not appropriate to achieve the outcome of the proposed objective.</p>	

## 10 Conclusion

(114) This evaluation has been undertaken in accordance with Section 32 of the RMA in order to identify the need, benefits and costs and the appropriateness of the proposal having regard to its effectiveness and efficiency relative to other means in achieving the purpose of the RMA. The evaluation demonstrates that this proposal is the most appropriate option as it:

- Best gives effect to higher order documents, including the national planning standards;
- Is the most effective and efficient way to achieve the purpose of the Act; and
- Addresses the identified issues.

### 10.1 Monitoring

(115) Section 32 of the RMA does not require an evaluation report to address how the requirements for Plan effectiveness and national policy statement monitoring are to be undertaken. However, as a measure to assess the effectiveness of the proposed objective, policies and rules, this section addresses:

- How each objective, and where relevant policy and rule package, will be monitored; and
- What success would look like for each objective.

*Table 23: Monitoring Summary*

Objective	Indicator used to monitor effectiveness	What success will look like
NH-O1 - Subdivision, use and development within the Natural Hazard Overlays does not significantly increase the risk to life or property.	<ul style="list-style-type: none"> <li>• The impacts on new development from natural hazard events;</li> <li>• Number of approved resource consents in high hazard areas;</li> <li>• Value of insurance claims from natural hazard events; and</li> <li>• A review of conditions of approved resource consents.</li> </ul>	<ul style="list-style-type: none"> <li>• New development is not impacted by natural hazard events;</li> <li>• Few resource consent applications in high hazard areas being approved;</li> <li>• The value of claims will plateau or rise at a level that is proportionally less than population and economic growth; and</li> <li>• Developments in low and medium hazard areas having mitigation measures to reduce the impacts from natural hazards.</li> </ul>

(116) This section will inform the Council’s Plan Monitoring and be a key input to the Council’s obligations to monitor plan effectiveness under s35(2)(b); as well as its obligations under the Environmental Reporting Act 2015, the Ministry for the Environment’s National Monitoring System and National Policy Statements.

## Appendix 1 Review of Other District Plans

### Introduction

This report summarises the approach taken by selected territorial and unitary authorities across New Zealand for managing natural hazard risk. This information will be used to support the Section 32 report for the Natural Hazards Chapter review for Upper Hutt City Council.

## Appendix 2 Review of Submissions on the Draft Plan Change

On 1 October 2021 the draft plan change maps and provisions for natural hazards were made publicly available for consultation for a 4-week period. As part of this consultation, UHCC directly contacted the owners of those properties that are located within the Wellington Fault Overlay and the Mangaroa Peat Overlay and invited them to provide comments on the proposed maps and provisions. In total 37 parties contacted the Council, of which

- 18 of the points of contact related to the Wellington Fault Overlay mapping and provisions;
- 17 of the points of contact related to the Mangaroa Peat Overlay mapping and provisions;
- 1 point of contact related to high slope hazards; and
- 1 point of contact requested that flood hazards be included in the plan change

All parties that contacted Council have been followed up with either by way of email or a phone call to acknowledge their submission and the matters that have been raised. Where appropriate further clarification of the matters raised within the submission have been sought. A more detailed breakdown of the queries as they relate to each hazard is provided below.

### Wellington Fault Overlay

The feedback and queries relating to the Wellington Fault Overlay can essentially be broken into three broad categories:

- Requests for further information on the Wellington Fault;
- Requests for what the proposed provisions mean for future development/or insurance; and
- Opposition to the mapping or provisions.

The breakdown on the number of these requests is as follows:

Nature of the request	Number	Percentage
Request for further information on the Wellington Fault	2	11%
Request for what the proposed provisions mean for future development or insurance	11	61%
Opposition to the mapping provisions	5	28%
<b>Total</b>	<b>18</b>	<b>100%</b>

Of the five parties that opposed the mapping or provisions, three were of the view that the proposed provisions were not needed or would impact the value or insurability of their properties. The remaining two, raised concerns around the accuracy of the mapping of the fault hazard overlay, in respect to their individual property.

### Mangaroa Peat Overlay

The feedback and queries relating to the Mangaroa Peat Overlay can essentially be broken into the same three broad categories as the Wellington Fault Overlay:

- A request for further information on the Mangaroa Peat Overlay
- A request for what the proposed provisions mean for future development; and
- Opposition to the mapping or provisions.

The breakdown on the number of these requests are as follows:

<b>Nature of the request</b>	<b>Number</b>	<b>Percentage</b>
Request for further information on the Mangaroa Overlay	2	12%
Request for what the proposed provisions mean for future development	2	12%
Opposition to the mapping or provisions	13	76%
<b>Total</b>	<b>17</b>	<b>100%</b>

The opposition to the provisions largely related to how the Mangaroa Peat Overlay is mapped in and around Katherine Mansfield Drive. There was a consistent message from people in this area that the overlay extent included areas that were covered in clay or were not areas of peat. This resulted in the extent of the Mangaroa Peat Overlay being revisited to see if it could be refined. This includes site visits to impacted properties.

# Appendix 3 Cost Benefit Analysis



# Appendix 4 Amended District Plan Chapters