

Wanganui District Council District Plan Review

Section 32 Report

Phase Two – Natural Hazards

T7 Recognition and Reduction of Hazard Potential

Wanganui District is affected by a number of natural hazards. Parts of the urban area are particularly prone to flooding, while the coast and hill country are affected by land instability and erosion. The District is also dissected by fault lines and is vulnerable to sea level rise and tsunami. The natural hazards occurring within the District have an impact on current and future development. They can cause loss of human life and significant damage to private property, roads and other District assets. They can also cause damage to the natural environment.

In addition to natural events, hazards are associated with hazardous facilities, ie the storage, use and transportation of hazardous substances. These facilities are commonly found in both the rural and urban parts of the District. Hazardous substances, like agricultural sprays, industrial chemicals or fuel, have properties which are, or when in contact with air or water are, potentially flammable or explosive, and toxic. If hazardous facilities are not located appropriately or managed properly, the accidental release of, or loss of control of, hazardous substances can cause short or long term damage to human health and contamination of land, water, air, or damage to ecosystems.

It is recognised that while a hazard may be present, the hazard potential is only realised when there are land use activities, buildings or structures and important natural values in the vicinity of the hazard. It is not possible to eliminate hazards, but it is possible to manage the location, design and operation of land use activities and hazardous facilities to avoid, remedy or mitigate the potential adverse effects of hazards on human life, property and the environment.

The Resource Management Act requires both the Regional and the District Councils to share responsibility for the natural hazards of flooding, subsidence, and seismic, volcanic and tsunami hazards; and for hazardous substances. The Regional Policy Statement further defines the appropriate management responsibilities of local authorities for natural hazards and hazardous substances

~~I24 Clarification and Coordination of Monitoring Responsibilities~~

~~Both the Manawatu-Wanganui Regional Council and the Wanganui District Council have monitoring responsibilities under the Resource Management Act 1991. Considerable overlap could occur in the monitoring of resources in the rural parts of the district, the coast and *natural hazard** features.~~

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Comment	Issues I24 is proposed to be deleted as unnecessary as it duplicates the provisions of S62(1) of the Resource Management Act in restating the statutory responsibilities of the Regional Council and the Territorial Authority	
summary of benefits	Avoids duplication of provisions set out in the RMA	
summary of costs	No cost implications	
Effectiveness	The removal of this issue is efficient as it removes unnecessary duplication	
Efficiency	The removal of this issue is efficient as it removes duplication	
Appropriateness	The removal of this issue is appropriate as it removes duplication	
Risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods	The Council must be able to demonstrate that it is managing the risks of natural hazards in accordance with the responsibilities set out in S62(1) of the RMA and in accordance with Chapter 10 of the Regional Council's Proposed One Plan.	

I35 Identification and Recognition of Natural Hazard Potential

The Wanganui District is affected by a number of *natural hazards**. The most significant ones are flooding, storms, tsunami, erosion and earthquakes. Knowledge of the location and characteristics of *natural hazards** and their impacts on surrounding *development** and the *environment** is far from comprehensive.

The known major areas of concern include the following:

- a. The Whanganui River has a history of flooding in the urban area and the middle-reaches. Flooding has also occurred in the Matarawa Catchment, affecting Wanganui East and the upper valleys of that catchment. The Whangaehu River, along the south-eastern *boundary** of the district, also has a history of flooding.
- b. Erosion is a widespread problem in the hill country. There are frequent wash-outs, landslips and subsidence after periods of heavy rain.
- c. Areas of hillside instability within the urban area of Wanganui, particularly the hillside north of the Bastia Tower (above Turoa Road and below Mount View Road) and the hillside opposite the Whanganui City Bridge, below Hipango Terrace.
- d. The potential for coastal erosion in some coastal areas is severe. At Mowhanau, the cliffs have been subject to significant erosion and at the Coastal Residential Zone north of Castlecliff, the cliffs are predicted to erode by 18 m before reaching equilibrium.
- e. Areas of river bank erosion are found along both banks of the Whanganui River, causing loss or damage to private property, *network utilities** and public assets like roads.
- f. Tsunami is a significant risk to the Wanganui urban area.

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~~g. Several faults including Nukumarū and Upokongaro have been mapped along the marine terraces between Wanganui and Hawera. Parts of the Wanganui urban area adjacent to the river could be affected by soil liquefaction.~~

~~h. Sand dune inundation in the Castlecliff and South Beach area.~~

~~i. The potential for loss of land due to a sea level rise resulting from global warming.~~

I36 — Reduction of Natural Hazard Potential

~~1. It is important to distinguish between the hazard associated with natural events, and the risk they pose. Hazard is principally defined by the characteristics of the physical event, eg groundshaking associated with earthquakes. The risk is defined by the probability of occurrence combined with the potential effects* of that occurrence. It is not possible to control the occurrence of *natural hazards**, however, it is possible to reduce the hazard potential to protect human life, property and the *environment**. To reduce hazard potential, the following matters need to be addressed:~~

- ~~a. The location and operation of new land use *activities** in areas affected by *natural hazards**.
b. Protection of existing *developments** in high risk areas.~~

~~2. Coordinate actions between the Manawatu-Wanganui Regional Council and Wanganui District Council giving *effect** to the provisions of the Regional Policy Statement for Manawatu-Wanganui:~~

~~a. Flooding — It is recognised that *development** can exacerbate the risk to life and property from flooding. Responsibility for managing this risk falls on both the Wanganui District Council and Manawatu-Wanganui Regional Council.~~

~~b. Accelerated soil erosion and land instability — This is primarily a regional council responsibility but the District Council has jurisdiction when this may affect structures or the safety of people.~~

Issue I41 as amended Decisions	I41 — Land instability in the Old Town area The Old Town is an area of inherent land instability, with an underlay of unconsolidated river deposits. The potential for severe ground shaking accompanying earthquakes is high, leading to collapse of heritage <i>buildings*</i> and items, particularly those that are constructed of masonry, with damage to heritage areas.
Appropriateness	The proposed deletion and replacement of these issues is appropriate as it seeks to simplify and clarify the provisions. I41 is more appropriately grouped with Built Heritage as the objectives and policies related to this are located in that topic. Rest of the S32 evaluation is unchanged for this issue.

I42 The Wanganui District is affected by a number of natural hazards*. The most significant ones are flooding, storms, tsunami, erosion and earthquakes. Knowledge of the location and characteristics of natural hazards* and their impacts on surrounding development *and the environment* is far from comprehensive. This along with lack of public

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awareness hinders the avoidance and mitigation of those hazards.

I43 Inappropriate land use and occupation of areas at risk from earthquake, flooding, ponding landhillside instability can cause unnecessary risks for people and property

Comment	Issues I35 and I36 are proposed to be deleted and replaced with I41, I42 and I43 above which together focus on building understanding of levels of risk in the old town, the extent and potential impact of natural hazards and the desirability of steering new development away from areas of high risk. These issues cover the key facets of land use planning for natural hazards in the district. The first issue focuses on the known risks in the main urban area posed by natural hazards to people and property and the damage it can cause. The second issue highlights the need to build knowledge and further understanding of the risks associated with natural hazards in the district. The third issue highlights the potential that inappropriate use and development (e.g. large-scale earthworks or large buildings) can potentially worsen the risks or severity of natural hazards, particularly on adjacent properties	
summary of benefits	Clarifies and simplifies natural hazard risk issues.	
summary of costs	No cost implications	
Effectiveness	The proposed new issues clarify key areas of risk and remove erroneous and unnecessary information	
Efficiency	The proposed deletion and replacement of these issues is efficient as it is designed to clarify and promote improved understanding.	
Appropriateness	The proposed deletion and replacement of these issues is appropriate as it seeks to simplify and clarify the provisions. I41 is more appropriately grouped with Built Heritage as the objectives and policies related to this are located in that topic.	
Risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods		It is vital for the Council to demonstrate that it is managing the risk of natural hazards in accordance with the two key pieces of legislation which empower Council to manage and control natural hazards; the RMA and the Building Act 2004. Under the RMA, the use of land and subdivision is required to avoid, remedy or mitigate the effects of natural hazards. The Building Act 2004 has similar responsibilities when granting building consents on land subject to specified natural hazards, with certain exceptions.

~~**O16 Safe Rural and Urban Development Rural and Urban Development That Can Meet an Acceptable Level of Safety**~~

~~People, communities and the environment are to be protected from unacceptable risks of damage or loss associated with the occurrence of natural hazards and the location, design and operation of hazardous facilities.~~

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O37 A community informed about the potential risks of natural hazards to people and property in the Wanganui District.

Comment	The proposed objective identifies the need to raise awareness of the potential risks and impacts associated with the presence of natural hazards in the environment.	
summary of benefits	Improved awareness and understanding of the risks of natural hazards	
summary of costs	No direct cost implications although the community will be in a position to make better informed development and investment decisions	
Effectiveness	The new objective is effective as improved understanding will support better informed decision making	
Efficiency	The new objective is efficient as improved understanding will support better informed decision making which recognises inherent levels of risk.	
Appropriateness	The proposed objective is responsive to the understanding that an awareness of risk associated with natural hazards is a necessary precursor to taking action to ensure that building design and land use activity reflect the need to avoid or mitigate the potential impacts of natural hazards. Consultation feedback from the community recognised the need to increase knowledge and awareness of natural hazards as well as raising concerns regarding the potential impact on property prices.	
Risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods	It is vital for the Council to demonstrate that it is managing the risk of natural hazards in accordance with the requirements of the RMA and the Regional Council's Proposed One Plan.	

O38 The risks of natural hazards through inappropriate subdivision and development are avoided or mitigated whilst minimising adverse effects on natural, cultural and ecological values.

Comment	<p>This proposed objective directly relates to avoiding and mitigating the risks posed by natural hazards, thereby providing for people's health, safety and well-being. The objective sets clear direction for decision-makers in terms of both avoidance and mitigation. The objective protects subdivision and development from being located where it can be damaged or destroyed by hazards such as flooding. However, by not requiring avoidance in all circumstances, it recognises it is difficult to predict when and where some natural hazards will occur (e.g. earthquakes), where the effects could be extensive. Therefore, it is considered effective and efficient to mitigate the risks in these circumstances.</p> <p>The proposed objective recognises that it will not be possible to eradicate risk entirely and identifies the need to adopt a graduated approach to risk management by either avoiding or mitigating the risks of inappropriate subdivision and development resulting from the presence of natural hazards.</p>	
summary of benefits	Improved awareness and understanding of the risks of natural hazards	
summary of costs	No direct cost implications although the community will be in a position to make better informed investment decisions	
Effectiveness	The proposed objective is amended to better align with the policy direction in the One Plan and is effective as improved understanding	

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	will support better informed decision making	
Efficiency	The new objective is efficient as improved understanding will support better informed decision making recognises inherent levels of risk.	
Appropriateness	This proposed objective is considered appropriate in achieving the purpose of the RMA.	
Risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods	It is vital for the Council to demonstrate that it is managing the risk of natural hazards in accordance with the requirements of the RMA and the "One Plan" Regional Policy Statement.	

**P69 Community Awareness of Hazards
Promote better community knowledge and awareness of risks associated with ~~natural hazards and hazardous facilities~~**

A fundamental requirement of risk management is knowledge about the location and impact of ~~natural hazards and hazardous facilities~~ on people, communities and the environment, and awareness about the degree of risk present.

Traditionally, there is reluctance to identify and recognise hazards as development constraints. This is due to a lack of, or inadequate, knowledge and information, and concern that the identification of hazards can alarm people and reduce the value of properties. However, not recognising the presence of hazards can also lead to increased risks of environmental damage, property damage or loss of life.

Current information about hazards and associated risks is limited and not readily available. Work will be required to extend, update and continuously monitor and review the information available. While it may not be possible to provide definitive or predictive information about hazards and their associated risks, the availability of information should be regarded as a trigger mechanism, or a warning system, for potential land owners and developers.

This policy represents a long term, indirect approach to risk management. It requires resources to be devoted to information gathering and establishing links with the community. There are existing mechanisms which can be tapped into for implementation, eg civil defence activities, use of Project Information Memoranda and Land Information Memoranda etc.

~~The use of cleaner and safer production guidelines will complement District Plan conditions and terms.~~

~~The guidelines will be voluntary and self-regulating. They will be particularly useful for small industrial or commercial operators or home occupations involving the use of hazardous substances.~~

The approach is also consistent with the requirements of section 35 of the Resource Management Act 1991.

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Comment	This policy is amended and retained to focus specifically on hazardous facilities. The impact of natural hazards is captured in new proposed policies P112, P113, P114, P115, P116, P117, P118 and P119.
summary of benefits	The retention of this policy with a re-defined focus on hazardous facilities allows clear separation from policies addressing natural hazards.
summary of costs	No cost implications. There are some aspects that are being reworded; however, they capture the integrity of the policy.
Effectiveness	The amendment of this policy is efficient as it creates more precise guidance for decision makers.
Efficiency	The amendment of this policy is efficient as it creates more precise guidance for decision makers.
Appropriateness	This policy is appropriate as it creates more precise guidance for decision makers.
Risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods	There will be minimal risk.

~~**P70 Recognise natural hazards as development constraints and control new developments in identified hazard-prone areas**~~

~~It is not possible to control the occurrence of *natural hazards**, but it is possible to minimise damage or loss to the *environment**, people and property caused by these events by taking appropriate precautions and preventive measures. A fundamental precaution is ensuring that the location of new activities can meet adequate safety standards. For example, the location of new dwellings within an area of active coastal or river erosion should be avoided. The location and design of dwellings within flood-prone areas need to be carefully managed to ensure that there is adequate protection against flooding. The location and design of new *developments** can increase or decrease the hazard potential. For example, clearance of vegetation cover or extensive excavations on inherently unstable slopes can lead to accelerated soil erosion and slumping, causing problems off-site. Such problems should be avoided, remedied or mitigated, eg revegetation of slopes, or the use of engineering solutions, like slope stabilisation work. It is not intended to seek blanket restrictions on new *developments**. However, it is considered necessary and appropriate to identify hazard-prone areas and set conditions and terms to ensure that new *developments**, including *subdivision**, can meet adequate safety standards and are not likely to increase hazard potential both on *site** and in the surrounding areas.~~

Comment	This policy is proposed to be deleted as the impact of natural hazards is captured in new proposed policies P112, P113, P114,
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	P115, P116, P117, P118 and P119. The current regulatory approach relies upon a case-by-case assessment to determine the nature, extent and likelihood of a natural hazard affecting land use and development. This case-by-case is inefficient as it does not provide clarity and certainty for landowners, developers and Council in managing the risks. In addition, this approach may not be effective if the natural hazard risks are not identified during the development process. Therefore, this approach is not appropriate as it does not protect people and property from the adverse effects of natural hazards
summary of benefits	Replacement policies P112, P113, P114, P115, P116, P117, P118 and P119 reflect the need to promote better understanding of natural hazards as development constraints and the risks to people and property.
summary of costs	There will be minimal additional costs as the replacement policies capture the integrity of the deleted policies.
Effectiveness	The removal of this policy is efficient as it creates more precise guidance for decision makers.
Efficiency	The removal of this policy is efficient as it creates more precise guidance for decision makers.
Appropriateness	The deletion of this policy is appropriate as the replacement policies create more precise guidance for decision makers.
Risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods	There will be minimal risk.

~~P71 Identify the 50 year and 100 year flood lines~~

~~In the vicinity of Kowhai Park and extending along Anzac Parade, 100 houses are at risk from 50-year floods. There are concerns that if flooding in the Whanganui River catchment coincides with flooding in the Matarawa catchment, the affected area could be much more extensive and the number of houses affected could be significantly higher.~~

~~Further investigations have been initiated to determine more accurately flood levels at different locations on both sides of the Whanganui River for different flood events.~~

~~The Building Act 1991 only provides for protection up to a 50-year flood event. Due to the high concentration of population and high cost of public and private investment in the urban area, a precautionary approach is considered necessary and justified.~~

Comment	This policy is deleted as the impact of natural hazards is captured in new proposed policies P112, P113, P114, P115, P116, P117, P118 and P119. The 100 and 200 year flood lines have been identified by the Regional Council and have been mapped as part of PC25
summary of benefits	Replacement policies P112, P113, P114, P115, P116, P117, P118 and P119 reflect the need to promote better understanding of natural hazards as development constraints and the risks to people and property.
summary of costs	There will be minimal additional costs as the replacement policies

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	capture the integrity of the deleted policy.	
Effectiveness	The removal of this policy is efficient as it creates more precise guidance for decision makers.	
Efficiency	The removal of this policy is efficient as it creates more precise guidance for decision makers.	
Appropriateness	The deletion of this policy is appropriate as the replacement policies create more precise guidance for decision makers.	
Risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods	There will be minimal risk.	

P112 Promote improved understanding of natural hazards as development constraints and better knowledge and awareness of the risks to people and property in the Wanganui district.

P113 Avoid or minimise risk of loss of life or injury or environmental damage due to use or development in hazard prone areas.

P114 Adopt a precautionary approach in relation to use or development affected by potential natural hazards, especially where hazards are not well understood or the effects of natural processes are difficult to assess or where the effect of activities on natural hazards are not well understood.

P115 Ensure that land affected by contaminants in soil is appropriately identified and assessed at the time of being developed and if necessary remediated, or the contaminants contained, to make land safe for human use.

P116 In relation to flood hazards, avoid subdivision and sensitive or inappropriate new development in areas identified as being inundated by a 1 in 200 year (0.5% AEP) flood event unless flood hazard avoidance or mitigation is achieved.

Comment	This policy is designed to address risk to life and property by avoiding inappropriate subdivision or sensitive development in areas subject to inundation in a 1 in 200 year flood event. Discussion with Powerco has recognised that activities or development such as transmission line support structures are not classed as sensitive development and are low risk in terms of this policy.
summary of benefits	This policy is designed to protect life and property by restricting inappropriate subdivision or sensitive development in areas subject to inundation in a 1 in 200 year flood event.
summary of costs	The costs of new development in areas subject to inundation in a 1

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	in 200 year flood event will include measures to mitigate against the impact of flooding.	
Effectiveness	This policy is effective as it creates more precise guidance for decision makers.	
Efficiency	This policy is efficient as it creates more precise guidance for decision makers.	
Appropriateness	This policy is appropriate as it creates more precise guidance for decision makers.	
Risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods	The 1 in 200 year flood risk area has been identified by the Regional Council and is included in the district plan as part WDC management of the risk of natural hazards.	

P117 In designing earthworks or roadworks any adverse effects of diverting floodwaters should be avoided, remedied or mitigated.

Comment

Overall and in view of current levels of understanding of natural hazards it is considered the current approach of the District Plan is not the most appropriate to achieve the proposed objective of avoiding or mitigating risk. The alternative approach of providing clear information, raising awareness and providing direction is considered more appropriate as it protects areas at risk from the effects of natural hazards by managing activities in these areas. Inevitably much existing development is located in areas subject to natural hazards and it is important to manage any further intensification or redevelopment of these areas. In addition, new areas of development may be subject to natural hazards, and it is important to firstly avoid these areas, or secondly, mitigate the adverse effects from these hazards. Given this conclusion, and the One Plan policy direction, the District Plan policies should identify areas at significant risk from flooding and landslip and control structures and activities within these identified areas. In addition, the policies should recognise the lifelines role of critical infrastructure as outlined in the proposed One Plan. This approach is considered the most appropriate way to achieve the proposed objectives for natural hazards.

Policy P118 as amended	In assessing resource consents Council will require confirmation, including, as appropriate, the preparation of a geotechnical report, as to the suitability of the site for <u>subdivision</u>, use or development and that the effects of the hazard shall be avoided, remedied, or mitigated.
Comment	It is critical that geotechnical assessment is made of areas identified as prone to land instability hazards, prior to any subdivision, use or development being permitted by Council. A case by case assessment will ensure that risks to the environment, including people and property, are confirmed as low, prior to development proceeding or a more rigorous assessment of effects will be required.
summary of benefits	Improved awareness and understanding of the risks of natural hazards. It clarifies the standard of assessment and confirmation that needs to be achieved. Landowners or potential purchasers can have confidence that development will be safe, as risks will have been mitigated, if a development is permitted on a site prone to land instability.

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summary of costs	Landowners will face potentially higher costs to obtain geotechnical reports and resource consent fees. Previously this was often required by Council but this fact was not necessarily well understood or anticipated by landowners or potential purchasers.	
Effectiveness	The proposed policy as amended is better aligned with the policy direction in the One Plan and is effective as it clearly articulates that a geotechnical report is likely to be required. A case by case assessment will ensure that risks to the environment, including people and property, are confirmed as low, prior to development proceeding or a more rigorous assessment of effects will be required.	
Efficiency	The proposed policy as amended is efficient as it prevents subdivision and development where the effects of the hazard could cause very high risk of loss of life or property and where mitigation of the effects of the hazard cannot be achieved.	
Appropriateness	<p>This proposed policy is appropriate in achieving the purpose of the Act. It is appropriate to clearly signal the information requirements for development up front. It would be inappropriate to permit development in the Hillside Protection Overlay Areas A or B without at least considering the need to obtain a geotechnical engineer's assessment of the impact of a proposed subdivision, use or development on the environment.</p> <p>In view of existing levels of understanding of local natural hazard risks, it is considered the current District Plan approach is not the most appropriate to achieve the proposed objective of avoiding or mitigating risk. The alternative approach of providing clear information, raising awareness and providing regulatory direction is more appropriate as it protects areas at risk from the effects of natural hazards by managing activities in these areas. Inevitably much existing development is located in areas subject to natural hazards and it is important to manage any further intensification or redevelopment of these areas.</p> <p>Given this conclusion, and Horizon's One Plan policy direction, the District Plan policies advocate the identification of areas at significant risk from land instability and control of structures and activities within these identified areas. This approach is considered the most appropriate way to achieve the proposed objectives for natural hazards.</p>	
Risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods	This policy is vital to enable Council to demonstrate that it is managing the risk of natural hazards in accordance with the requirements of the Act and the Regional Council's Proposed One Plan.	

Policy P119 as amended	<p>In relation to areas prone to land instability, avoid sub-division and development where risks to people and property from the effects of the hazard are identified as very high on the planning maps (Area A), and the effects are not mitigated, and r Require appropriate mitigation measures where risk is identified as moderate. Identify areas susceptible to land instability where assessment of the hazard risk is required before land use or subdivision activities are carried out. Where there is unacceptable geotechnical risk consent shall be declined.</p>
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Comment	This proposed policy signals the approach that Council will take, to reduce the potential risk in areas potentially prone to risks associated with land instability. The policy sets clear direction for decision-makers in terms of avoidance. The policy prevents subdivision and development where the effects of the hazard could cause very high risk of loss of life or property and where mitigation of the effects of the hazard cannot be achieved.	
summary of benefits	Improved awareness and understanding of the risks of land instability and clarity about the relative levels of risk between hazard prone areas, as well as greater clarity about the process and thresholds involved to investigate development of sites which are susceptible to land instability. Landowners will be better informed, facilitating better investment decisions.	
summary of costs	Landowners will face potentially higher costs to obtain geotechnical reports and resource consent fees. Previously this was often required by Council, but this fact was not necessarily well understood or anticipated by landowners or potential purchasers.	
Effectiveness	The proposed policy as amended is better aligned with the policy direction of the One Plan and is effective. Improved balancing of the risk of development versus prohibiting development is achieved and is more sustainable. This Policy is an effective umbrella for the proposed rules for the Land Stability Assessment Areas.	
Efficiency	The proposed policy as amended is efficient as it prevents subdivision and development where the effects of the hazard could cause very high risk of loss of life or property and where mitigation of the effects of the hazard cannot be achieved.	
Appropriateness	<p>This proposed policy is appropriate in achieving the purpose of the Act. It is appropriate to clearly signal a threshold for development and give effect to the One Plan.</p> <p>In view of existing levels of understanding of local natural hazard risks, it is considered the current District Plan approach is not the most appropriate to achieve the proposed objective of avoiding or mitigating hazard risks. The alternative approach of providing clear information, raising awareness and providing regulatory direction is more appropriate as it protects areas at risk from the effects of natural hazards by managing activities in these areas. Inevitably much existing development is located in areas subject to natural hazards and it is important to manage any further intensification or redevelopment of these areas. In addition, new areas of development may be subject to natural hazards, and it is important to firstly to identify and avoid these areas, or if not practical to avoid, then mitigate the adverse effects of natural hazards.</p> <p>Given this conclusion, and Horizon's One Plan policy direction, the District Plan policies advocate the identification of areas at significant risk from land instability and control structures and activities within these identified areas. This approach is considered the most appropriate way to achieve the proposed objectives for natural hazards.</p>	
Risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods	It is vital for the Council to demonstrate that it is managing the risk of natural hazards in accordance with the requirements of the Act and give effect to the "One Plan" Regional Policy Statement.	

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Rules	As amended by the Committee's decisions on submissions
Comment	<p>Rules applying to activities in areas covered by the Land Stability Assessment Areas (LSAA) have been consolidated and amended to reflect the continuing improvement in understanding of levels of risk of land instability and ongoing investigation of areas of potential risk identified by M203. These priority study areas are being assessed in accordance with "Practice Note Guidelines for Landslide Risk Management" (Australian Geomechanics Society 2007).</p> <p>Rules 185, 186, 187, 188 and 189 are proposed for deletion as they have limited relevance to the assessment and management of the risk of landslip. These matters are regulated via the underlying zone. Rule R184 is amended to reflect permitted activities within both LSAA A and LSAA B and the underlying zone.</p> <p>Rule R256 proposes a requirement to submit a geotechnical report to demonstrate that activities permitted by the underlying zone can be undertaken without worsening or accelerating land instability on the site or its surroundings. This rule has been further clarified through submissions and a clear threshold for compliance added.</p> <p>The Committee determined to provide one set of rules for both LSAA A and LSAA B. These rules reflect the level of regulation necessary to achieve objective O38. New rule RXX introduces Controlled Activity status so conditions can be applied, for specific activities where they demonstrate a low risk of land instability.</p> <p>The Committee determined to delete R257 as it acknowledged that Council cannot be certain that it will never to be safe to excavate or erect structures on LSAA A land.</p> <p>Together these rules will regulate subdivision, use and development to avoid or mitigate the effects of hazard risk, in areas of very high risk of slope instability (Area A) and areas of moderate to high (marginal) risk of slope instability (Area B).</p>
summary of benefits	<p>The identification of areas prone to land instability risk and their systematic examination is an essential part of demonstrating that Council is effectively managing the risk from natural hazards. Potential risk to life and property will be reduced and better informed decisions about development and investment will be enabled. The provisions as amended by decisions on submissions will add clarity to the process, and greater flexibility for land development where appropriate.</p>
summary of costs	<p>Improved information on the geographical location of and levels of risk from land instability will likely have cost implications for land and property values.</p> <p>Landowners will face potentially higher costs to obtain geotechnical reports and resource consent fees. Previously this was often required by Council but this fact was not necessarily well understood or anticipated by landowners or potential purchasers.</p>
Effectiveness	<p>Options other than regulation have been applied till recently and they have resulted in regular slope failures within the affected areas. Regulation raises awareness of the risk and sets thresholds for</p>

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	provision of information and acceptable levels of risk, enabling landowners and potential purchasers to make informed investment decisions. Regulation is the most effective method.
Efficiency	The proposed rules are efficient as they create more precise guidance for developers and decision makers. The regulation of future development will also increase the protection for existing development in the area from a risk of landslide caused by inappropriate new development.
Appropriateness	The proposed rules are appropriate as they create more precise guidance for decision makers.
Risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods	<p>The detailed assessment and evaluation of areas at risk from land instability is a necessary activity for the Council as part of its obligation to demonstrate that it is effectively managing the risks from natural hazards. Failure to manage these risks will expose parts of the community to unnecessary levels of risk to life and property.</p> <p>The risks of not acting, far exceed any potential time or cost inconvenience to landowners resulting from implementation of Plan Change 25 as amended by decisions on submissions.</p>