

WANGANUI DISTRICT COUNCIL

Subject: **Plan Change 25 – Natural Hazards Decision on Submissions**

Meeting Date: **6th, 7th, 15th and 16th May 2013**

1.0 INTRODUCTION

- 1.1 The Resource Management Act 1991 (RMA) requires each part of the District Plan to be reviewed not later than 10 years after the Plan becomes operative. The Plan was made operative on 27 February 2004. In accordance with Section 73(3) of the RMA, Council is presently reviewing the District Plan in Phases. This Plan Change is part of a series of changes proposed as part of the Phase 2.
- 1.2 This report records the public notification and hearing process in relation to Plan Change 25. It records the Hearings and Regulatory Committee's decision made pursuant to its delegated authority to hear and determine all District Plan Changes, except for those delegated to an Independent Commissioner.

2.0 PROCEDURAL MATTERS

- 2.1 The Hearing was convened to hear submissions on 6th, 7th, 15th and 16th May 2013. The Committee then closed the meeting at 12.30pm on 16th May, and deliberated on relevant submissions on the 16th May and 27th June 2013.
- 2.2 The Hearings Panel members were: Councillors Sue Westwood (Chair), Hamish McDouall, Nicki Higgie, Jack Bullock, Rob Vinsen and Randhir Dahya.
- 2.3 Submitters who presented or tabled information to support or expand their submissions were:
- Les Wright (Submitter 2)
 - Stuart Bruce & Sue Elliott (Submitter 14)
 - Stephen & Mary Carle (Submitter 11)
 - NZ Historic Places Trust
 - Horizons Regional Council (Submitter 17)
 - Robert Handley and John Massen on behalf of an unincorporated group of residents called "The Overlay Affected Residents Group" (Submitter 5)
 - Michael, Janet, and Matthew Penn (Submitter 13)
 - Wayne James Brougham & Lynair Elizabeth Benefield (Submitter 12)
 - Oliver Lane & Mary Anne Devonshire (Submitter 1)
- 2.4 Proposed Plan Change 25 was publicly notified in accordance with Clause 5 of the 1st Schedule of the Resource Management Act 1991 on 1st November 2012, with the period for submissions closing on 4th December 2012.

- 2.5 A total of 24 submissions were received. All submissions were summarised along with the decisions requested, and this document was publicly notified in accordance with Clause 7 of the First Schedule of the Act.
- 2.6 The further submission period closed on 13th February 2013. Five further submissions were received. Further submissions have been summarised, in Appendix 1 to this report, under the relevant original submission.

3.0 SCOPE OF THE PROPOSED PLAN CHANGE

- 3.1 Plan Change 25 is the result of a review of the existing Plan provisions relating to land instability.
- 3.2 Plan Change 25, as amended by this decision, creates Land Stability Assessment (LSA) Area A and Area B which replace the existing Hillside Protection Zone, for the affected sites. Council has identified 10 areas prone to land instability, for priority investigation and two studies have been completed. The areas affected by the new Areas are defined in these studies. Area A comprises sites of very high landslide risk. Area B comprises marginal land requiring geotechnical investigation to confirm suitability for development.
- 3.3 Issues relating to hazardous facilities have not been addressed as part of this current phase of work. Other hazards will be reviewed in future phases of the District Plan review. One area in the vicinity of Turoa Road which is presently zoned Hillside Protection Zone is not affected by this Plan Change. This area will be reviewed in a separate plan change.
- 3.4 The Horizons One Plan requires that Council take a precautionary, all-hazards approach, when determining how best to sustainably manage development within the context of the Wanganui environment. Resource limitations have necessitated a more segmented approach than is desirable, but still works towards a comprehensive outcome.

4.0 RELEVANT STATUTORY CONSIDERATIONS

4.1 RMA PART II CONSIDERATIONS

Sustainable management is defined in the Resource Management Act 1991 as meaning “managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while –

- (a) *Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
- (b) *Safeguarding the life-supporting capacity of air, water, soil and ecosystems; and*
- (c) *Avoiding, remedying, or mitigating any adverse effects of activities on the environment.”*

4.2 In accordance with Section 5 of the Resource Management Act, Proposed Plan Change 25 has been developed with a focus on providing for the Community’s health and safety whilst avoiding or mitigating any adverse effects of activities on the environment, including people and property.

4.3 Objectives O37 and O38 of Proposed Plan Change 21 state:

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

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.”

- 4.4 The purpose of Plan Change 25 is to update the District Plan objectives in relation to natural hazards generally and to specifically review the Hillside Protection Zone policies and methods, to reflect the research and legislative changes that have occurred since the operative Plan was prepared. Plan Change 25 has been developed to manage subdivision and land use within those areas identified as having a marginal or very high risk of land instability.
- 4.5 As a result of submissions, the Committee supported a more streamlined approach, so that the LSA Areas will only deal with issues directly related to land instability. All other resource management matters will be addressed through the underlying zone which will continue to apply.
- 4.6 Plan Change 25, as amended by this decision, specifies to address the potential hazard risks. This is believed to be the most sustainable way to manage the balance between private property owners desires to develop and the Community’s right to be informed about and protected from potential natural hazards, especially where the risk can be avoided or migrated.
- 4.7 The actual effect of these changes to the District Plan is detailed in Appendix 1 of this Report.
- 4.8 Section 6 of the Resource Management Act 1991 requires all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, to recognise and provide for matters of national importance, including:
- (d) The maintenance and enhancement of public access to and along the coastal marine area, lakes and rivers.*
 - (e) The relationship of Maori and their cultural and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.*
 - (f) the protection of historic heritage from inappropriate subdivision, use and development.*
- 4.9 Plan Change 25 is considered to be consistent with Section 6 of the RMA 1991 as it introduces objectives, policies and rules that require future subdivisions and development do not worsen or accelerate any natural hazard, such as flooding and land instability, which may then indirectly compromise the Community’s enjoyment of access to the River; or prevent recognition of, or cause damage to heritage sites and buildings and natural and cultural heritage features, as follows:

Objective O38 requires that:

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

4.10 Under Section 7 of the Act, the Council must also “have particular regard to” matters including:

- (b) The efficient use and development of natural and physical resources;*
- (f) Maintenance and enhancement of the quality of the environment;*
- (i) The effects of climate change.*

4.11 Plan Change 25 identifies areas prone to land instability and addresses the particular issues associated with subdivision, use or development of sites within such areas. Council is acting constructively and proactively to inform the Community about known hazards and their extent. This will assist landowners to make decisions in full knowledge of the potential risks and potential costs. In addition Council proposes to assess development on a case by case basis, subject to specified criteria. This will also facilitate an informed decision to enable efficient use and development of land in these hazard prone areas. In turn such an approach will facilitate maintenance of the quality of the environment.

4.12 The amendments made to Plan Change 25 as a result of this decision, will streamline the approach, and enable consideration of a wider range of land use activities than originally proposed. This will provide greater opportunities for landowners to identify mitigation measures and more efficiently utilise land affected by the LSA Areas.

4.13 The geo-technical research undertaken to date in relation to land instability has taken account of the implications of climate change for the sites affected by LSA Areas.

4.14 With regards to Section 8, no specific concerns relating to Treaty issues have been raised during consultation or through submissions on the Plan Change.

5.0 RELEVANT POLICY STATEMENTS AND PLAN PROVISIONS

5.1 Horizons Regional Council – Regional Policy Statement/ Regional Plan

Sections 75(3) and 75(4) of the Act require that a district plan must give effect to any regional policy statement and must not be inconsistent with any regional plan. Horizons Regional Council's Operative Regional Policy Statement and Proposed One Plan are considered to be relevant to this Plan Change in that they include requirements around the avoidance and mitigation of natural hazards generally and rules in relation to managing land instability risk.

An assessment of how the provisions in Plan Change 25 compare with the objectives and policies of the Operative Regional Policy Statement and the Proposed One Plan are considered in Table 1 below.

Table 1

Operative Regional Policy Statement (RPS)		Plan Change 25
Objectives 24 & 5, 6, & 36	Policy	Evaluation
To avoid or mitigate the adverse effects of natural hazards upon human life, infrastructure and property, and the natural environment. Obj 5. To achieve	24.1 To raise public awareness of the risks of natural hazards. 24.2 To improve knowledge of the threats posed by natural hazards. 24.3 To ensure that activities and development of areas at risk from natural hazards minimise risks to human life, infrastructure and property, and the natural environment. In areas of high	Objective O37 gives effect to RPS Objective 36 directly and Objective 24 indirectly. Objective O38 gives effect to RPS Objective 24, 5 and 6 directly as the focus of research and protection is in the urban area where greatest risk to life and infrastructure is present.

<p>sustainable land use. Obj 6.To avoid, remedy or mitigate the adverse effects of urban development. Obj 36. To improve the availability of information to assist the understanding of the effects of activities on the environment.</p>	<p>risk to people and communities, hazard avoidance is to be advocated. Where costs of hazard avoidance outweigh its benefits local authorities are to promote hazard mitigation. This includes education, planning, response and recovery procedures.</p>	
Regional One Plan (As Amended by Decision August 2010)		Plan Change 25
Objective	Policy	Evaluation
<p>Objective 10-1: Effects of natural hazard events The adverse effects of natural hazard events on people, property, infrastructure and the wellbeing of communities are avoided or mitigated.</p>	<p>Policy 10-1: Responsibilities for natural hazard management In accordance with s62(1)(i) RMA, <i>local authority</i> responsibilities for <i>natural hazard</i> management ...are as follows:... (c) <i>Territorial Authorities</i> must be responsible for: (i) developing objectives, policies, and methods (including <i>rules</i>) for the control of the use of <i>land</i> to avoid or mitigate <i>natural hazards</i> in all areas and for all activities except those areas and activities described in (b)(ii) above, and (ii) identifying <i>floodways*</i> (as shown in Schedule I1) and other areas known to be inundated by a 0.5% annual exceedance probability (AEP) flood event on planning maps in <i>district plans</i>, and controlling <i>land</i> use activities in these areas in accordance with Policies 10-2, and 10-4.</p>	<p>Objective O38 gives effect to One Plan Objective 10-1. Policies P113, P114 and P116 give effect to Policy 10-1. Rules are proposed for land instability hazards. It is acknowledged that rules are required along with detailed site specific scale mapping for other hazards. This is being developed in conjunction with Horizons and as budgets permit completion of technical research.</p>
	<p>Policy 10-2: Development in areas prone to flooding</p>	<p>Policy P116 and P117 at present give some effect to this policy. A future phase of the Plan review project will include rules to give stronger effect to Policy10-2.</p>
	<p>Policy 10-5: Other types of natural hazards The ... Territorial Authorities must manage future development and activities in areas susceptible to natural hazard events (excluding flooding) in a manner which: (a) ensures that any increase in risk to human life, property or infrastructure from natural hazard events is avoided where practicable, or mitigated where the risk cannot be practicably avoided (b) is unlikely to reduce the effectiveness of existing works, structures, natural landforms or other measures which serve to mitigate the effects of natural hazard events, and (c) is unlikely to cause a significant increase in the scale or intensity of</p>	<p>Objective O38 gives effect to One Plan Objective 10-1. Policies P113, P114 and P116 give effect to Policies 10-1 and 10-5. The LSA Areas, as amended via this decision, give effect to this policy in relation to land instability. It is acknowledged that rules are required along with detailed site specific scale mapping. This is being developed in conjunction with Horizons and as budgets permit completion of technical research.</p>

	natural hazard events.	
	<p>Policy 10-6: Climate change</p> <p>The ... Territorial Authorities must take a precautionary approach when assessing the effects of climate change and sea level rise on the scale and frequency of natural hazards, with regard to decisions on:</p> <p>... (c) activities adjacent to rivers, and streams</p> <p>...(f) flood mitigation efforts activities,</p>	<p>Policy P114 gives effect to this RPS policy, by requiring a precautionary approach in respect to assessment of all hazards and this includes consideration of climate change. It is acknowledged that rules are required along with detailed site specific scale mapping. This is being developed in conjunction with Horizons and as budgets permit completion of technical research..</p>

- 5.2 The Plan Change reviews objective and policy provisions relating to all natural hazards. Rules for LSA Areas will address land instability hazards. Rules relating to flooding, coastal hazard and liquefaction have not been developed as part of this phase of the Plan review project because essential research or mapping information was not yet available.
- 5.3 This Plan Change proposes to amend the existing Hillside Protection Zone, and create new overlays: LSA Area A and Area B. The Plan Change introduces objectives, policies and rules relating to these new Areas. The LSA Areas do not replace the existing Residential or Outer Commercial zone for properties, but apply additional considerations and restrictions specific to the land instability issues present in each Area.
- 5.4 Two land instability risk assessment reports have been completed. The *Shakespeare Cliff, Wanganui -Building Line Restriction report, 2009* and the *Hillside Stability Study - Anzac Parade/ Putiki Drive Wanganui, 2011*. These reports define the areas for which restrictions are proposed. The reports broadly indicate appropriate regulation thresholds to avoid future potential risks to life associated with development within the areas potentially subject to landslide hazards. This Plan Change proposes to alter the Plan, to reflect an improved understanding of risk outlined in these two reports.
- 5.5 Plan Change 25 recognises that there will be sites and types of development that may still be readily accommodated within the hazard prone areas. The Plan Change introduces objectives and policies that require new development and land use to better take account of the significant hazard potential that exists in some parts of the District.
- 5.6 The objectives and policies also set out to raise public awareness about the existence of natural hazard risks and ensure development avoids or mitigates hazard potential. The policies indicate a precautionary approach to development in hazard prone areas and avoidance of subdivision and development where risk cannot be reduced to a low level. The policies also require technical assessment and confirmation that the effects of the potential hazard risk is low or that appropriate mitigation measures can be implemented on marginal land where the potential for landslide is moderate.
- 5.7 Plan Change 25 also introduces new methods including rules to address the potential land instability hazard, present around the urban fringes of Wanganui. Plan Change 25 sets up a regulatory framework which would likely be applied to other urban areas prone to land instability. Such areas may be identified in future land instability risk assessment research.

6.0 SUMMARY OF SUBMISSIONS

6.1 Refer to Appendix 1 to this report for a summary of each submission.

7.0 PRINCIPAL ISSUES IN CONTENTION

The submitters identified the following concerns about the Plan change:

7.1 Inadequate Research

- The research is not sufficiently robust, to establish restrictions on land use.
- Council needs to do more detailed comprehensive research; and then manage the areas identified as being at risk.
- Individual property stability assessments need to be made prior to any Plan change.
- Insufficient information to define areas of high and moderate risk; or to confirm whether avoidance or mitigation is appropriate or confirm necessity for regulation.
- The extent of areas identified as hazard prone is disputed.

7.2 Mitigation of External Works

- Lack of consideration of external factors that mitigate the hazard, such as planting and retaining structures.
- Council needs to take more positive action such as planting and stabilisation works.
- Land instability is not pervasive and some triggers have been removed by flood protection works.

7.3 Overly Restrictive Plan Provisions

- Inclusion of method M193 publicising hazard in PIMs and LIMs processes is not accepted.
- The regulation proposed is considered overly punitive.
- Wairere Road submitters requested that a Building Line Restriction apply over their properties (as exists now for the Shakespeare Cliff area), instead of the proposed zones.
- The Plan change is considered uncertain, unclear and unworkable and unreasonably restrictive in relation to telecommunication and electricity facilities.

7.4 Other

- An Independent Commissioner should consider submissions not Councillors.
- Provision for Flood Hazard risk is missing from the Plan change.

8.0 SUMMARY OF EVIDENCE HEARD

8.1 Key evidence presented by Submitters:

8.1.1 Adequacy of the Research

- Many residents felt the report was cursory at best and not sufficient. They questioned the adequacy of the research and the uncertainty created by recommending zones to restrict or avoid development.

- Mr Massen, on behalf of Submitter 5, questioned the ability of the report authors to make such strong statements about the levels of risk. He drew the Committee's attention to the technical documents used to assess the susceptibility or risk of hazards. His conclusion was that the level of research undertaken was only sufficient to, at most, assert that the properties within the Hipango Tce study area were susceptible to land instability.
- Landowners questioned whether the Opus report took into consideration retaining walls, vegetation, and other relevant matters. It was noted that the report identified the current underlying risk of slippage.
- Concern was expressed over the location and extent of risk areas and submitters questioned how these were determined.
- Mr Brougham (Submitter 12) detailed his attempts to obtain background papers to the Opus report relating to Hipango Tce. He found the information to be inadequate and inconsistent with the report. He suggested that 'any so called problems' had been caused by the actions of man (sometimes Council) and not because of instability of the land. This submitter also highlighted that if, as the Opus report suggests, the Zone A area is subject to a very high landslide risk, and given that implies a catastrophic event taking place within 10 years – how can Council allow people to live in this area at all?
- It is for Council to identify risk in a more professional, in depth manner and assess the risk carefully. Mr Lane (Submitter 1) considered the Opus Report needed to be challenged and discarded before it runs the risk of being enshrined in the District Plan. He believed the Hillside Protection Overlay Area A was randomly drawn as it appears to extend under the house at 48 Hipango Tce itself and he queried how can this be when there was not site visit.

8.1.2 Mitigation of External Works

- The residents felt that the storm water separation project was poorly administered and that many landowners discharged storm water to ground.
- Mr Brougham (Submitter 12) outlined the history of development on his site at 72 and 72a Hipango Tce. He provided details of work done to rebuild the riverbank in 2009 to stabilise the State Highway and indicated that this work confirmed his belief that the river was undermining the road and eroding the toe of the embankment. He observed that since this work, they have had no stability issues at their property and observed vegetation regrowth on the slope. It is the submitter's view that their property does not suffer from 'very high landslide risk'. That the risk to their property was due to Council and TNZ's reluctance to maintain their property which then impacted on 72 Hipango Tce above.
- Reference to water seepage from other properties in the area affecting the risk of slope failure. Mr Lane queried the impact on the hillside of the water separation work carried out in 2007. He noted 'apparent evidence of seepage at the foot of the hillside containing large traces of chlorine, not normally found in natural water'.
- The Penn family also concluded that it was in their view, the inability of the Council Infrastructure Department to manage hillside areas that is the key risk to residents here. In particular the submitter noted the reluctance or inability to provide effective stormwater management to residents in Hipango Tce. The impact of this is excessive water flowing over properties, at alarming frequency, for sustained periods. Council

appeared to lack the expertise or skills to manage land in hillside areas and appeared to apply the same approach to these areas as to flat well-draining land. The Penn family concluded that it is this approach of applying the same methods and budgets to hillside areas that is directly contributing to the issues of land stability in Area A.

8.1.3 Overly Restrictive Plan Provisions

- Mr Wright (Submitter 2) spoke of the preference of Wairere Road landowners to see a Building Line Restriction be applied to their properties as has occurred for Shakespeare Cliff. This is simple and provides more certainty without creating unnecessary fear. Concerned about impact of the mysterious zone may have on property values. He stated that landowners really don't understand the implications of a zone but can clearly understand a building line ie you do not build beyond that line.
- Mr Bruce (Submitter 14) expanded on Mr Wright's submission evidence to identify that the word 'zone' is exceptionally emotive and he did not want to see it applied to their properties. Mr Bruce also believed more consultation and site visits should have occurred.
- Several land owners indicated that they were happy with the risk of slippage when they bought the property and thought that it was unnecessary to communicate the risk to future land owners as this would give the wrong impression of the level of risk and reduce property values.
- Impact on ability to develop properties now and in future, and the additional costs to do so was also a significant concern.

8.1.4 Other

- Effects on property values, ability to obtain insurance and the cost of insurance were raised by submitters repeatedly.
- Landowners noted that they accepted the risk of buying in this area, and being more general in the location of the risk areas would reduce the perceived risk and limit the potential effect on property values.
- Submitters were united in their view that method M193 should be deleted as publicising the existing information will have negative impact on property values and raise concerns unnecessarily. Mr Lane drew the Committee's attention to an article in the Dominion Post from 9th May 2013 where the Ombudsman chastised Kapiti DC for being unreasonable in the information it placed on LIM reports. He suggested that the ruling indicated a need to take great care in what notation is placed on a LIM. Accuracy is required and in this instance that requires a robust analysis and geotechnical support which he did not consider evident at present.
- The Penn family presented evidence to highlight the level of stress caused to not only their family but the neighbourhood and the wider community, due to the uncertainty caused by this process.
- Mr Wright also highlighted that he considered the consultation to be a poor effort. Affected landowners were not advised about the existence of the potential hazard until the report had been completed and was presented to a landowner meeting. Requested that Councillors decline Plan Change 25 until it can improve its communication with landowners and undertake more detailed investigation to prove stability issues exist.

8.2 Key evidence presented in the Officer's report:

8.2.1 Adequacy of the Research

- Submitters critiqued the Opus Report in some detail. No evidence was presented by a geotechnical expert to suggest that the findings of the report were not accurate where they recommend that no future development should be permitted in Area A and that site specific geotechnical investigation should occur prior to consideration of any development.
- Mr Frampton has indicated in response to evidence presented for Submission 5 (Paragraph 38 (iv)), that significantly more resource would be required to refine the details of the hazard areas any further. His view is that, configuration of the overlays may not change as a result. There is sufficient evidence to confirm that:
 - the areas identified are susceptible to hazard risk associated with land instability; and
 - a precautionary approach to land use and development in such areas should be adopted by Council.
- In response to questions about susceptibility versus hazard risk, Mr Frampton provided the following answer: Susceptibility means something may happen – there is risk. He referred to Maps of Liquefaction which identify that soils may liquefy but there will be some trigger event for there to be a hazard. When you identify risk an assessment using frequency or timeframes is used. It identifies that a particular hazard event may occur in a specified time period. Putting a timeframe or frequency of occurrence is the key thing about 'risk' identification.
- It is not necessary to be certain of the full extent of the hazard risk before regulating. Rather Council must make an overall judgement using the information it has, to determine whether the most effective and efficient way to achieve the objective (to avoid or mitigate natural hazards) is by restricting development on the identified sites to ensure, detailed investigation is undertaken prior to any development.
- Two land instability risk assessment reports have been completed. The Shakespeare Cliff, Wanganui -Building Line Restriction report, 2009 and the Hillside Stability Study - Anzac Parade/ Putiki Drive Wanganui, 2011. These reports define the areas for which restrictions are proposed. The reports broadly indicate appropriate regulation thresholds to avoid future potential risks to life associated with development within the areas potentially subject to landslide hazards. This Plan Change proposes to alter the Hillside Protection Zone, to reflect the improved understanding of risk detailed in these two reports.
- Plan Change 25 recognises that there will be sites and types of development that may still be readily accommodated within the hazard prone areas. The Plan Change introduces objectives and policies that require new development and land use to reflect the significant hazard potential that does exist in some parts of the District.
- The objectives and policies also set out to raise public awareness about the existence of natural hazard risks and ensure development avoids or mitigates hazard potential. The policies indicate a precautionary approach to development in hazard prone areas and avoidance of subdivision and development in high hazard areas where risk cannot be reduced to a low level. The policies also require technical assessment and confirmation that the effects of the potential hazard risk is low or that appropriate

mitigation measures can be implemented on marginal land where the potential for landslide is moderate.

- In relation to properties covered by the Hillside Protection Overlay the most cost effective way to address this risk is to manage or avoid further development in the areas of highest risk. Balancing the costs and benefits to both the wider community and individual property owners, Council believes research undertaken to date is sufficient to guide it in establishing development thresholds.
- The cost of research and analysis to identify a more refined definition of the land subject to Very High Risk -Area A, would likely be significantly more costly. It is unlikely even at a more detailed level of analysis that the boundaries of Area A or development restrictions would significantly reduce.
- Using the qualitative risk assessment process described in 'Practice Note Guidelines for Landslide Risk Management 2007' (Australian Geomechanics Society, 2007), the following risk was identified in the Anzac Parade/ Putiki Drive Hillside Stability Study 2011: Page 7:

"For areas showing precedent for instability and having steep slope angles of greater than 40° the recurrence interval for failure is expected to be approximately 10 to 50 years, giving a likelihood of failure of likely to almost certain. Such a failure is likely to cause large scale property damage and would likely require major engineering works for stabilisation, giving a consequence of failure of catastrophic. The risk rating for such areas is therefore very high, and is unacceptable.

Some areas have shallower slope angles of 30° to 40° but still show some evidence of instability. Failures may occur less frequently on these marginal slopes, depending on site-specific conditions, such as colluvium thickness and type of groundwater level or may be smaller in extent, depending on site-specific conditions, such as the type and thickness of colluvium and the prevailing groundwater conditions. Therefore the recurrence interval will be variable for marginal slopes – perhaps 50 to 1000 years, giving a likelihood of failure of possible to likely. Property damage is likely to be less severe, and the structures may not be completely destroyed, giving a consequence to property of medium to major. The level of risk to property is therefore moderate to very high."

- It is for private land owners to demonstrate that land can be safely developed without adverse effect on the environment. It is not Council's role to investigate the suitability of individual sites for development. Council may undertake research or physical works to benefit a small group of ratepayers, but it is not unusual for a targeted rate to ensure those who benefit cover costs.

8.2.2 Mitigation by External Works

- Submitter 15 questioned why the 2011 report did not take specific account of building consent requirements for a dwelling built in 2006. Such details would be taken account of when a site specific assessment is completed in compliance with rule R256, prior to any future development being approved by Council.

Existing retaining structures or works may or may not be sufficient to enable future development. This assessment will occur for every proposed development to ensure any hazard risk is avoided, remedied or mitigated.

- Submitter 19 questioned why the site specific works were not taken account of in defining the Hillside Protection Overlay. Such details are the matters that would be taken account of when a site specific assessment is completed in compliance with rule R256, prior to any future development being approved by Council. The site was included because future works could be proposed that might create land instability risks not mitigated by the existing retaining wall. Existing retaining structures or works may or may not be sufficient to enable future development. An assessment will occur for every proposed development to ensure hazard risks are avoided or mitigated.
- Submitter 19 identified that some of the triggers for land instability have been removed through remedial works. It is assumed that the submitter is referring to the rock protection work undertaken downstream of the City Bridge.

Mr Frampton, Council's consultant Geotechnical Engineer, advised that rock protection work has removed the mechanism of cliff failure caused by the toe area being removed by the river and the upper part of the cliff becoming over steep and failing. However, the upper part of the cliff is still oversteep from past processes. The methodology used in the Shakespeare Cliff, Wanganui Building Line Restriction report 2009, assumed that the base of the cliff was fixed due to the stabilisation work, but the upper cliff would continue to regress back to a stable slope over time. This was covered in the report, and certainly mentioned in the peer review by GNS.

- In relation to Submitter 12, Mr Frampton is confident in saying there is no direct link between riverbank slumping and failures in the cliff face below 72 Hipango Terrace i.e. there is no causal link between them. The processes involved in the riverbank slumping and the cliff failures below the Hipango Terrace properties are different, and one does not directly result or increase the likelihood of the other.
- Submitter 12 also implied that Council infrastructure (or lack of maintenance of infrastructure) is the cause of much of the instability on the hillsides in the study area. The instability is an underlying issue that may be triggered by natural events, such as rain storm events or earthquakes, or by human-induced changes in the area. Development in these areas may increase the likelihood of instability through increasing water runoff and concentrated water flows, or by changing the loadings on slopes. Council infrastructure often suffers damage as the result of instability, and some initial earth movement may cause buried pipelines to pull apart, causing further movement and failure of the slope. Any development activity, by private owners, developers, or utility operators (including Council utilities) in an area of underlying instability may result in an increase in the likelihood of instability. Therefore these developments need to be carefully considered so as not to accelerate or worsen instability.

8.2.3 Overly Restrictive Plan Provisions

- Two fundamental challenges have been made to the Plan Change provisions by submitters:
 - Use of Building Line Restriction (BLR) in place of overlay; and
 - Apply only one less restrictive overlay rather than two as means to avoid or mitigate risks.
- **BLR** is a planning tool generally defined as:

'a restriction imposed on a site to ensure that when new buildings are erected, or existing buildings relocated, altered or substantially rebuilt no part of any such building shall stand within the area specified' [or be erected beyond the line].

- Mr Frampton advises that the term BLR was used for the Shakespeare Cliff site for a number of reasons:
 - The point of the work was to define a line at the top of the slope at the cliff, in front of which it was unwise to allow development as the risk to property from future cliff failures was too high. There was a definite boundary (the cliff edge) from which a line could be referenced, following analysis of the failure mechanism and the likely encroachment from the existing cliff edge back into land at the top.
 - The cliff face was very steep and it was assumed that no development work would be undertaken in this area.
 - There were no properties at the base of the cliff that might be impacted upon by landslide material travelling down the cliff face and running out at the base. Therefore the hazard could easily be addressed by a BLR along the top of the cliff.
- **BLR vs Zone:** A BLR was calculated for Shakespeare Cliff due to the finite nature of the hazard, uniformity of the risk profile and relative simplicity of the geology. This was an isolated assessment requested by the Infrastructure Group and was not contemplated as part of a wider hazard identification and planning process.
- Following this initial investigation, a high level assessment was then undertaken to identify areas where potential land instability hazards may exist within the wider urban area. That assessment identified 10 areas likely to be prone to land instability hazard risks. The areas studied so far and included in this Plan change relate to two of those areas, being those identified initially as most at risk.
- When this wider planning driven assessment of the hazard began, it was apparent a BLR was not the appropriate tool for the majority of the urban area. A zone was required as the geology and risk profiles vary considerably within generally hazard prone areas, resulting in some variation between the degree of risk created by proposed development.
- **Less Restrictive Overlay:** The reporting officer considered there was merit in simplifying the regulation proposed to capture both Areas A and B within one amended set of rules, whilst still requiring a geotechnical assessment prior to development. She was persuaded by the extensive presentation of Submitter 5, that sustainable management could be achieved by modifying the regulatory approach to largely apply the proposed Area B rules across both Areas A and B. She identified 'subdivision which creates additional building sites', as an exception. A distinction in activity status is warranted for this activity between Areas A and B as the level of risk indicates that intensification of development in Area A is not compatible with a 'precautionary approach'. The revised recommendations were included in the Officer's response to submissions presented on 16th May 2013.
- The reporting officer supported the request to rename the zone and partly supported the merging the Area A and B provisions. The Planning maps would continue to

¹ Adapted from the Clutha District Plan definition on page 252

indicate Areas A and B as distinct, but could be renamed Land Stability Assessment Area A and B, to enable some rules to remain specific to only Area A or B.

- Submitters have not denied that a hazard risk exist in these areas. Submitters largely accepted that some control of development is required to manage this risk.
- The reporting officer accepted that the level of research did not provide certainty that excavation or erection of structures could never occur safely (ie low risk) within Area A. For this reason it is recommended that a greater level of detail about activity status be included in the Plan and the prohibited status be deleted.
- **Section 32 Evaluation:** Council completed its s.32 evaluation as specified in s32 (3) and (4) of the RMA. A report was prepared and adopted by Council in making its decision to notify this Plan Change. The report was made available at notification. Council considers that report was appropriate. Some changes have been made to that report to take account of the approach adopted by Council in these decisions on Plan Change 25. Refer to Appendix 4 for a revised S.32 report.
- **Precautionary Approach:** The land affected by the LSA Areas is a mix of developed and undeveloped land. Even small scale development of existing sites may cause unacceptable risk to people and property. Under these circumstances it necessary to be clear, that sites within these Areas will be subject to geotechnical assessment and must be consistent with the objectives and policies of the Plan which require a precautionary approach.
- Evidence of 'deterioration' of hillside stability exists as demonstrated by the number of properties in the vicinity that have experienced land failure over recent decades. A number of incidents have been reported and researched over an extended period. The issue is that hillside instability exists and poses an unacceptable risk. To address this risk it is recommended that Council regulate activity where the risk is highest.
- Policy P113 requires development to 'avoid or minimise risk of loss of life or injury of environmental damage'. Council's Geotechnical Engineer gave the opinion, that activities could be enabled with minimal restriction, where it is confirmed by a suitably qualified and experienced geotechnical engineer that the risk of an activity is low and any associated works will not worsen or accelerate the level of land instability on the site or surrounding area.

Further that where such confirmation is not achieved that Council should decline such development or structures unless it is persuaded that appropriate works would mitigate the hazard appropriately.

- **Provision of LIMs and PIMs** are not RMA matters. Method M193 is not necessary but does raise public awareness of the issues.
- **Network Utilities:** The reporting officer accepted that maintenance and minor upgrading of existing telecommunication facilities be provided for as a permitted activity, without additional restriction. The provision should also be extended to cover all existing network utility facilities. It is assumed that service authorities would consider natural hazards when siting facilities or undertaking upgrade work, as these services are often vital during natural disasters. The exceptions are excavation and trenching, which can result in land instability.

- A range of activity classes should apply to network utilities in order to strike an appropriate balance between avoidance of hazard risk and practical operational necessity for network utilities.

The reporting officer did not support making 'maintenance and minor upgrading of network utilities' a Controlled activity where they don't comply with R256. Non Complying status was recommended as it may not be possible to mitigate with conditions and the development may need to be declined. This is not easily achieved under Controlled Activity status.

- The reporting officer did not support changes to allow for new work involving small scale trenching as permitted activities. The impact is not always predictable. Controlled status enables Council to impose conditions to ensure no adverse effects. A global consent to cover a wide area could be obtained to reduce potential delay issues.

8.2.4 Other

- It is acknowledged that flood hazard information is absent from the Plan Change. Council has been working with Horizons to establish a meaningful flood hazard line for the 1:200 year flood event. The timing of this mapping work has prevented its inclusion in Plan Change 25. It will be included as part of a subsequent phase of the Plan Review.
- The reporting officer accepted that maintenance and minor upgrading of existing telecommunication facilities could be provided for as a permitted activity in Area B without any additional restriction. It is considered that this provision should be extended to cover all existing network utility facilities as identified by Further Submitter 2. However in Area A it is considered that restrictions need to be imposed to ensure that activities even minor works do not cause undue risk. It is assumed that service authorities would consider natural hazards when siting facilities or undertaking upgrading work, as these services are often vital during natural disasters. Work in Area A, while it might be considered minor, such as trenches for cabling, can result in hillside instability, and the Council may want to impose conditions to eliminate any risk.
- The area identified in the Plan as Hillside Protection Zone on the hillside north of the Bastia Tower, above Turoa Road and below Mount View Road Bastia Hill (refer to Planning Map 16) has not been included in Plan Change 25. Therefore any decisions on Plan change 25 will not for the moment impact on those properties. This will be addressed in a subsequent Plan Change. The existing Plan provisions will continue to apply to Bastia Hill.
- Submitter 5 objected to Mr Frampton being present at the Hearing. Mr Frampton assisted the Reporting officer with technical aspects of the s42A report. On that basis Mr Frampton has attended the hearing to answer any technical clarification queries of the Committee. This is both lawful and appropriate given the technical nature of the issues. In this situation Mr Frampton is acting as a Council officer. All advice was provided on request of the Committee in the public Hearing to which submitters were welcome to attend. The Committee referred to "*Making Good Decisions – a resource for rma decisions makers*".² which states in relation to Plan Change hearing protocols and officer involvement:

² 1st edition (revised 2013) page 132, particularly paragraph 3; MfE & LGNZ

“Frequent and perhaps less formal involvement is acceptable in the exploratory setting of policy statement and plan hearings provided the chairperson ensures that the principles of natural justice are observed.”

9.0 MAIN FINDINGS ON PRINCIPAL ISSUES

- 9.1 The Committee considered the key elements and agreed on a philosophical approach. They concurred that the identified areas were likely to be subject to a land instability hazard and that this necessitated regulation through the District Plan. They considered that the evidence from most submitters indicated that most recognised that this was the reality. The Committee then considered the notified Plan Change provisions, the recommended changes in the S42A report, those proposed by submitters (most notably Submitter 5) and the revisions proposed by the reporting officer after hearing all evidence presented by submitters.
- 9.2 It was accepted there was a need to be careful about labelling and regulating according to the varying extent of the hazard, having particular regard to evidence presented by Submitter 5. It noted that the language in the Opus report may have run beyond the evidence that was available, given the extent of the analysis. However the Committee accepted that this did not negate the quality of the report, rather it gets to a point and overruns. The analysis was fit for purpose, noting that the purpose was to broadly identify zones or areas likely to be at risk of land instability. Sites within such areas would require closer inspection if and when any specific development was proposed. It was not accepted that site specific analysis by Council was necessary, efficient or appropriate.
- 9.3 The Committee then considered each submission and confirmed a decision for each. Refer to Appendix 1 for the decisions on submissions.
- 9.4 Adequacy of the Research
- The Committee noted that the key points of contention were firstly, the degree to which the Opus report could be relied upon to identify areas where restrictions of land use and development should occur. Secondly, the extent to which the Opus assessment of risk were appropriate given the level of detailed analysis.
 - It was noted that although Submitters have critiqued the Opus Report in some detail, no geotechnical evidence was presented to suggest that the findings of the report are not accurate.
 - It was noted that looking at the spreadsheet of the evidence of Submitter 5 (Pg36), there is a need to be careful with labelling. The issue was whether the Committee could say there is a hazard based on the information it has or whether the identified land is susceptible to instability.
 - The Committee noted that although Council's Geotechnical Engineer suggested that slightly less strong language in the recommendations, may have been more helpful, this did not diminish the fact that the report confirmed the existence of a potentially significant hazard risk. On this basis the Committee did not accept that the evidence of the Opus reports only identified a susceptibility to land instability. The Committee was confident that the hazards in the areas identified, needed to be managed. It was accepted that the reports identified risk based on accepted professional practices.

- The Committee was persuaded that the reports confirm a potential risk to life and the environment within the LSA Areas. As a result, the Committee believes it must take a precautionary approach to future development.
- Balancing the costs and benefits to both the wider community and individual property owners, the Committee believes research undertaken to date is sufficient to guide it in establishing broad thresholds for development. It accepts however that there is not sufficient evidence to warrant prohibition of any use or development.
- The cost of further research to identify a more refined area of potentially affected land would likely be significant. The Committee accepted that it is unlikely that the boundaries of the proposed Areas or development restrictions would significantly alter with more detailed analysis.
- Council considers that it is for private land owners to demonstrate that land can be safely developed without adverse effect on the environment. It is not Council's role to investigate the suitability of individual sites for development.

9.5 Mitigation of External Works

- The Committee noted that site specific details would be assessed in accordance with rule R256, prior to any future development being approved by Council.

It accepted evidence that existing retaining structures or works may or may not be sufficient to enable future development and, that an assessment will occur for every proposed development to ensure any hazard risk is avoided, remedied or mitigated.

- The Committee considered that evidence of 'deterioration' of hillside stability is demonstrated by the number of properties in the vicinity that have experienced land failure over recent decades. A number of incidents have been reported and researched over an extended period. The issue is that potential land instability exists and poses an unacceptable risk. Council will regulate activity where such a risk is identified.
- In relation to the issues of riverbank slumping and cliff failures, the Committee preferred its Geotechnical Engineers opinion that there is no direct link between riverbank slumping and failures in the cliff face below 72 Hipango Tce, ie there is no causal link between them. The processes involved in the riverbank slumping and cliff failures below Hipango Tce are different, and one does not directly result or increase the likelihood of the other.
- It was implied that Council infrastructure (or lack of maintenance of infrastructure) was the cause of much of the instability on the hillsides in the study area. This was not supported by any geotechnical evidence. The Committee preferred it's Geotechnical Engineer's opinion on this matter.
- The Committee noted that planting is an important tool to mitigate some of the impact of land instability. Planting can mitigate land instability to an extent, and should generally be encouraged. However there are some areas within Area A where planting is not possible, or situations where vegetation increases instability, and should be removed. It is not a panacea for all land instability. It was noted that Council could undertake planting and protection works on public land where this is appropriate, but this would not replace the need to restrict development. Councillors wish to encourage Officers to collaborate and share planting knowledge with residents.

- The Committee accepted the reporting officer's assessment that the S.32 evaluation had been completed appropriately.

9.6 Overly Restrictive Plan Provisions

- The Committee noted that submitters generally accepted the existence of a land stability risk, both at Shakespeare Cliff and in the vicinity of Hipango Tce. However, there was no consensus about the extent of that risk, nor the appropriate methods to address risk. The Committee recognised that having accepted the existence of a hazard risk in this area, 'do nothing' was not an option. Council is required to avoid and mitigate natural hazards to give effect to the Regional Plan.
- Council noted the detailed explanation of the differences between a Building Line Restriction method and a zone method, provided in the reporting officer's summary. After considering this information and the points raised by submitters, the Committee accepted that a zone was the appropriate tool to be applied in this instance, given the complex geology of the wider LSA Areas.
- The Committee accepted that the Opus report identified that there were different degrees of risk for properties located in Areas A and B. However the Plan could generally manage those risks without separate rules, by using site specific assessment. Each development will be assessed by a geotechnical engineer who will identify site specific issues and these will be addressed as part of the more generic resource consenting processes adopted for the LSA Areas. The Committee preferred the evidence of Submitter 5 in regard to use of a simplified overlay approach and noted that the reporting officer also supported this general approach in her summary response.
- The land affected by the LSA Area is a mix of developed and undeveloped land. Even small scale development of existing sites may cause unacceptable risk to people and property. Under these circumstances the Committee has determined it necessary to be clear, that sites within these Areas will be subject to geotechnical assessment and must be consistent with the objectives and policies of the Plan which require a precautionary approach.
- The Committee also considered the risks of various thresholds for vegetation clearance and sought to strike a balance between practical needs to maintain properties and any implications for land instability. The Committee noted that Council's Geotechnical Engineer was comfortable that a 5m² threshold could be applied in both Areas A and B.
- The Committee did not accept that resource consents were necessary for the erection of fences. It noted that Mr Frampton concurred that the risk did not warrant the proposed requirement, to get a geotechnical assessment and a resource consent.
- The Committee noted that retaining walls were a different issue, as there may be significant weight behind such walls and if drainage were not done correctly this could cause problems. A definition of retaining wall has been inserted to give greater clarity to Plan users about the extent of works not considered to involve a 'retaining wall' and to provide certainty about when a consent is required. The Committee did not consider it necessary to restrict small superficial landscaping walls which did not retain anything. The definition states:

“For the purposes of the Landslide Stability Assessment Areas, a retaining wall means a wall retaining more than 0.6m depth of ground.”

- The Committee accepted this threshold as it was advised that a depth of 0.6m would impose a vertical load of about 1 tonne per square metre, as well as a horizontal load into the ground. The horizontal and vertical loads have the potential to add to the destabilising forces acting on the slope, or at the top of the slope.
- The Plan provisions have been amended to provide greater clarity and to remove duplication and conflict, as identified by submitters. It is accepted that Rule 256 did not set out a clear process, it has been amended to add clarity of process and compliance as well as to indicate when a report is required.
- The Committee accepted that maintenance and minor upgrading of existing telecommunication facilities be provided for as a permitted activity, without additional restriction. The provision has been extended to cover all existing network utility facilities as identified by Further Submitter 2. It is assumed that service authorities would consider natural hazards when siting facilities or undertaking upgrade work, as these services are often vital during natural disasters. The exceptions are excavation and trenching, which can result in land instability, where the Council may want to require that certain measures are incorporated into the works to eliminate risk.

9.7 Other

- Provision of LIMs and PIMs is not an RMA matter. The Committee determined that M193 is not necessary and has been deleted. The Committee recommends that Council review the LIM and PIM process, in the appropriate forum, in light of the submissions received.
- The Committee did not consider use of independent commissioners necessary in this instance, as Council is not aware of any particular conflict or issue which prevents Councillors legally hearing and determining the Plan change.
- The Committee noted that a meeting was held on 29th March 2012 and 98 landowners were invited. Approximately 70 attended the meeting, along with Council officers and a consultant senior geotechnical engineer. A draft version of the proposed Plan Change was made available for informal public review in August 2012 and a public notice appeared in the Community Link.
- The Committee Chair proposed to address the issue of the broken water pipe raised by Submitter 14, in a meeting with the Manager Infrastructure outside the RMA Hearing process.

10.0 Section 32 REPORT EVALUATION

- 10.1 The s.32 report has been updated to include an evaluation of the amendments to the Plan resulting from Council’s Decision on Submissions. These changes as recorded in the report attached as Appendix 4.

11.0 STATEMENT OF DECISIONS AND REASONS

- 11.1 Refer to Appendix 1 to this report for the Council’s decision and reasons relating to each submission. Refer to Appendices 2 and 3 for the complete version of the Plan change text and maps.

12.0

Appendices:

- 1: Decisions on Submissions and Reasons for Decisions –**
- 2: Marked- Up Version of Plan Change 25 following Decisions on Submissions–**
- 3: Planning Maps affected by Decisions on Submissions–**
- 4: Section 32 Evaluation**