Section 32 Report

prepared for the

Natural Hazards Plan Change 3

to the Kaikōura District Plan

March 2021

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1. OVERVIEW AND PURPOSE

1.1 Purpose of Section 32

The overarching purpose of Section 32 of the Resource Management Act 1991 (RMA, or 'the Act') is to ensure that resource management plans, including plan changes, are appropriate in achieving the purpose of the Act.

Section 32 reports are a key part of the plan development process. They are intended to explain the reasoning clearly and transparently behind proposed plan provisions to readers, including decision-makers, tangata whenua, government and non-government agencies, landowners, and members of the public. Reports should explain the evaluation process including the consultation, technical work, methods, assumptions, and risks that informed and that underpinned selection of the most appropriate option for the provisions. Robust section 32 reports can prove highly useful to decision makers and the public, particularly where they clearly communicate the analysis undertaken to identify the most appropriate way to achieve the purpose of the RMA, paying particular regard to part 2, section 6(h)

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance

(h) the management of significant risks from natural hazards

The Kaikōura District Council is required to undertake an evaluation of any proposed District Plan provisions prior to notification. The Section 32 evaluation report provides the reasoning and rationale for the proposed provisions, titled ***Natural Hazards Plan Change 3***, and should be read in conjunction with the Natural Hazards Plan Change 3 document. As the Natural Hazards Plan Change 3 sit within the broader framework of the entire district plan, it is advisable to read them within the context of the remainder of the Kaikōura District Plan, in particular chapters 4, 8 and 13 as set out in appendix 5 of this s32 report.

1.2 Natural Hazards Plan Change 3 - Overview

1.2.1 Council decision to undertake a natural hazards plan change

In October 2018, Kaikōura District Council resolved to initiate a rolling review of its District Plan, starting with the Natural Hazards Plan Change 3. This decision was made to give effect to the abovementioned requirement under section 79 of the Act, but also to respond to several other drivers.

The Kaikōura district experienced a severe earthquake in 2016 which raised the community's awareness of natural hazards and became a catalyst for new scientific investigations to be undertaken on natural hazards in the district. Additionally, the natural hazards provisions needed to be updated to give effect to legislative changes, etc, which are covered in section 1.2.2 Legislative changes.

1.2.2 Changing context for natural hazards

Since the current 'first generation' Kaikōura District Plan became operative in 2008, there have been changes in legislation, as well as development in the technology and science to understand and plan for natural hazards. The communities understanding of natural hazards has also changed.

Legislative and higher order plan changes

Since 2008, changes to legislation and higher order policy documents that need to be accounted for in the Natural Hazards Plan Change 3 include:

The key pieces of legislation that are driving this plan change are the:

- Resource Management Act 1991 (RMA) amendments, including:
    - Amendments that elevate the management of significant natural hazard risk
    - Amendments that elevate the management of climate change
    - s106 amendments
- Canterbury Regional Policy Statement 2013 (CRPS)
    - A new CRPS became operative in 2013, replacing the 2008 version that the KDP was developed under.
    - Other polices that have since been introduced into the CRPS

The RMA is due for a complete overhaul, which presents an opportunity for the Kaikōura District Council to set direction of management of natural hazards.

Science

The Natural Hazards Plan Change 3 also seeks to incorporate new scientific studies and technical knowledge on the following natural hazards that have potential to impact upon the Kaikōura District.

- Flooding
- Fault rupture
- Liquefaction
- Landslide Debris inundation
- Debris flow fans

The Natural Hazards Plan Change 3 will also incorporate the climate change predictions into the rule framework.

Community experience of natural hazards

The context for managing natural hazard risk has also changed considerably since the District Plan was first made operative, with the District having experienced several devastating events including the magnitude 7.8 earthquake (and consequent aftershocks), massive landslides (caused by the earthquakes), liquefaction (caused by the earthquakes), debris flows, and floods. In terms of natural hazard management, assessment techniques have advanced considerably and there has been a shift towards taking a risk-based approach towards managing natural hazard risk.

1.2.3 Purpose of the Natural Hazards Plan Change 3

The purpose of the Natural Hazards Plan Change 3 is to:

- Improve community resilience
- Introduce new policies and rules regarding natural hazards in the Kaikōura District
- Provide certainty as to how natural hazards will be managed in the future
- Clearly indicate where land use activities are and are not appropriate in regard to natural hazards
- Using a risk based approach to provide for and manage land use planning in areas that may be subject to natural hazards
- Achieve the purpose of the RMA and give effect to the CRPS
- Promote community engagement, understanding, and awareness
- Address legacy issues

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1.2.4 Scope of the Natural Hazards Plan Change 3

Within the Kaikōura District Plan, provisions and maps relating to natural hazards are being reviewed. New provisions have been developed to reflect the latest scientific information, methods and community preferences for managing natural hazard risk in the district.

In the operative Kaikōura District plan, Chapter 8 is the dedicated natural hazards chapter, containing objectives, policies and methods to manage activities in areas subject to natural hazards. The District Plan's operative maps show flood hazard overlays that the rules in Chapter 8 and Chapter 13 apply to.

In addition to Chapter 8, where several other chapters contain provisions or narrative relating to natural hazards, those provisions or narrative needed to be included within the scope of the Natural Hazards Plan Change 3. These chapters include:

- Chapter 1: Introduction
- Chapter 2: Policy and legal framework
- Chapter 3: Users guide
- Chapter 4: Definitions
- Chapter 7: Development and Tourism
- Chapter 13: Subdivisions

Coastal hazards are not included in the scope of this plan change as key technical inputs are not due for some years. A review on coastal hazards will be completed at a later date as a separate review.

1.3 Significance of this Topic

As identified above, the Kaikōura District is susceptible to a wide range of natural hazards. Flooding is influenced by climate change. Technical experts have predicted that rainfall events will become more intense, and storm events will become more common (based on Intergovernmental Panel on Climate Change (IPCC) advice). When natural hazards occur, they can result in damage to property and infrastructure, and lead to a loss of human life. It is therefore important to identify areas susceptible to natural hazards and to restrict or manage subdivision, use and development (including infrastructure) in these areas proportionate to the risk posed, in order to reduce the potential effects of future natural hazard events.

Legislative amendments to the RMA as a result of the 2010-2011 Canterbury earthquakes place greater emphasis on the consideration of natural hazard effects when developing plans and assessing resource consents for proposed activities.

The Operative District Plan recognises the significance of natural hazards. However, it lacks the technical data to adequately manage natural hazards within the District. The Operative plan does not give effect to many directions of the Canterbury Regional Policy Statement. The proposed provisions seek to assist giving effect to the Canterbury Regional Policy Statement, Resource Management Act and other planning documents, by reducing the natural hazard risk to people, property and communities.

1.4 Review of Operative Objectives, Policies and Methods

The Kaikōura District Plan became operative in 2008. As the current CRPS became operative in 2013, it is not unexpected that the Plan's natural hazards provisions do not fully give effect to it.

Chapter 8 is the dedicated natural hazards chapter in the Kaikōura District Plan, with several other chapters also containing provisions and/or narrative relating to natural hazards. A summary of the operative natural hazards provisions has been provided below.

The natural hazards provisions in each of these chapters are evaluated in Section 4 of this report.

1.4.1 Operative Objectives, Policies, Methods and Rules

Table 1: Natural hazard policies in the operative district plan

	Objective	Policies	Methods / rules
General natural hazards	To avoid or mitigate loss of life, damage to assets/ infrastructure and disruption to the community	• Increase awareness • Develop a natural hazard register • Develop emergency response procedures • Ensure activities don't affect flood protection works	• Require resource consents for gravel removal • Consider natural hazards in the resource consent process • Avoid duplication between Kaikōura District Council and the Canterbury Regional council provisions
Flooding	To avoid loss of life, damage to assets or infrastructure and disruption to the community as a result of flooding	• To identify, where sufficient information exists, areas potentially susceptible to flooding from any source, and the degree of that risk. • To avoid expansion of urban areas of Kaikōura township and the establishment of residential units and habitable buildings on land prone to high flood risk that have been identified on the Flood Hazard Maps, or where the probability of flooding is greater than 0.2% AEP. • To discourage expansion of urban areas of Kaikōura township, and the establishment of residential units and habitable buildings, on land prone to moderate flood risk that have been identified on the Flood Hazard Maps, or where the probability of flooding is greater than 0.2% AEP. • To mitigate against the effects of flooding on buildings and people by providing for measures such as raised floor levels, setbacks from stop banks, and clear flood ways.	• The delineation of flood hazard areas, and inclusion of rules in the Plan to: a. control land use in these areas. Kaikōura District Plan Natural Hazards 5 b. where the Council does not possess sufficient information concerning the potential flood risk of a site, to require applicants for resource consent to fully assess the level of this risk and to provide a site assessment in terms of the specific nature of and likely effects of flooding on their properties. c. control subdivision in these areas. • Through the Council's annual planning process: a. To co-operate with the Regional Council, and to consult with interested people and organisations, including Te Rūnanga o Ngai Tahu, regarding the maintenance and

		• To enable the maintenance and replacement of existing flood protection structures. • To discourage utility lifelines such as communication and powerline support structures, from locating in the highest risk flood hazard areas where they may fail to provide essential communication during flood events	construction of river protection works. b. To negotiate with the Regional Council to avoid or resolve the potential for duplication of methods, such as rules, in relation to flooding.
Coastal hazards (not within the scope of this plan change)	To avoid subdivision, use and development that increases the risk to people and property from coastal hazard events.	• To avoid subdivision, use and development that increases the risk to people and property from coastal hazard events. • To permit the establishment of new protection structures in the coastal environment only where they are the best practicable option for the future and so that adverse effects are avoided to the 6 Natural Hazards Kaikōura District Plan extent practicable. When considering any application to renew or replace existing structures, the abandonment or relocation of those structures will be considered among the options. • To recognise and enhance the ability of natural features such as hard rock shorelines, beaches, sand dunes and wetlands to protect the built environment from coastal hazard events and to recognise that some natural features may migrate inland as the result of dynamic coastal process including sea level rise. • To recognise the possibility of sea level rise, to monitor predictions and research relating to sea level rise, and to vary or amend the District Plan as and when necessary so that effects of sea level rise are mitigated or avoided.	• To control subdivision in areas subject to coastal hazards. • Co-operate with the Regional Council, and consultation with interested people and organisations, including Te Rūnanga o Ngai Tahu, in the maintenance and construction of coastal protection works. • Support the inclusion of rules in Regional Plans of the Regional Council, in relation to activities located in areas subject to the effects of coastal erosion and inundation. • Avoid the duplication of relevant provisions, including rules, in the Kaikōura District Plan and Regional Council plans. • Through the Council's annual planning process discourage activities which increase the rates of coastal erosion by providing information or advice to adjacent landowners.

Land instability	To avoid or mitigate adverse effects such as damage to assets or infrastructure, disruption to the community, loss of life, or sedimentation, as a result of development on unstable land.	• To avoid the building and subdivision on unstable land unless damage to assets or infrastructure can be avoided or mitigated.	• The identification of unstable land, and inclusion of rules in the Plan to control subdivision and land use in these areas. • At the time resource consent applications are made to subdivide, to take into account the stability of land.
Over-exposure to the sun	To avoid or mitigate adverse health effects on people from over-exposure to the sun.	• To retain and enhance natural shade, such as trees, in public areas such as reserves and parks. • To erect structures to provide shade in public areas where there is no shade from natural features. • To encourage the use of protective measures such as hats and sunscreen.	• The provision of information and advice to visitors of the dangers of over-exposure to the sun. • The addition of shady areas to provide relief for people from the sun's rays.

1.4.2 Assessment against the higher order planning framework

A previous assessment of the operative natural hazards provisions against the CRPS identified that it does not adequately mitigate and manage natural hazard risk within the Kaikōura District and does not give effect to the CRPS.

While the introduction to Chapter 8 recognises flooding and earthquake hazard events as significant natural hazards within the Kaikōura District, the rule framework does not address all these natural hazards. The only areas that have been mapped are areas subject to flooding, which are based on outdated geomorphological maps and flooding history.

The Canterbury Regional Policy Statement requires the Kaikōura District Council to manage new subdivision, use and development of land in areas on or adjacent to a known active earthquake fault trace, and areas known to be potentially susceptible to liquefaction and lateral spreading. Fault rupture and liquefaction are not addressed by the operative District Plan.

As such, the District Plan objectives, policies and rules that are currently operative do not adequately recognise or identify the scope or extent of natural hazards in the Kaikōura District, and the associated risk to development in these areas. Consequently, further development undertaken in accordance with the operative provisions of the District Plan within areas subject to natural hazards could unacceptably increase the risk to people and property.

Chapter 8: Natural Hazards is the operative District Plan's dedicated natural hazards chapter. Chapter 8: Subdivisions also contain rules and policies relating to natural hazards.

In general, the assessment found that the operative district plan gives partial effect to the Canterbury Regional Policy Statement. The main areas, or gaps, where the district plan does not give full effect include:

- Geographic identification of natural hazards is limited to flood hazards, and only in the Kaikōura township and nearby plains. Other areas in the District that are prone to flooding, and other natural hazards that the Kaikōura is subject to, are not identified.
- Flood hazard rules do not manage non-residential (urban) activities such as commercial, industrial, community activities, or rural activities in flood prone areas.
- The Plan includes specific rules for flood hazard only. While there are objectives and policies for slope instability, there are no rules. Other natural hazards such as liquefaction and fault traces are not addressed specifically in the Plan's objectives, policies or rules.
- The methodology for assessing flooding did not identify the 0.2% or 0.5% AEP flood event, making it difficult to align mapped provisions with the CRPS requirements.
- The methodology does not take into account the effects of climate change

1.5 Technical information available

This section describes the technical assessments that are of relevance to natural hazards in the Kaikōura district. These reports have been used to develop the natural hazard overlays that are proposed to be shown on the planning maps (detailed in appendix 6) and have guided development of the proposed natural hazards policies and rules.

Table 2 – Technical reports

Natural hazard	Title and author	Summary
Flooding	**Kaikōura Fans Flood Modelling Investigation** Environment Canterbury, 2020	This report details the alluvial fan system operating in the Kaikōura District. The study area focuses on Harnetts Creek, Waimangarara River and Luke and Middle Creeks. The investigation also looks at Floodgate Creek, Lyell Creek, Kowhai River, This report also details historic flooding events within the Kaikōura District as well as current river control and drainage schemes. • Recommends future improvements to model
	Waiau Toa/Clarence River Floodplain Investigation Environment Canterbury, 2019	• The report encompasses the Waiau Toa/Clarence River floodplain and models an estimate of the likely extent of flooding for 5-10, 50 and 500 year Average Recurrence Interval (ARI) flood events. • As well as this, the report looked at the likely depths and levels for the 5-10, 50 and 500 year ARI • The reports recommend further monitoring to increase accuracy of results
	Kekerengū, Hāpuku and Oaro flood plain Investigation, Environment Canterbury, 2019	• This report covers the Kekerengū, Hāpuku and the Oaro flood plains • The aims of this report were to gauge a better understanding of larger rivers within the Kaikōura District.

Natural hazard	Title and author	Summary
		• Modelling investigation for the Kekerengū, Hāpuku and the Oaro flood plains was undertaken to quantify extent and depth of flooding in catchments. • Report was designed for land use planning purposes and emergency management purposes.
	Ote Mākura (Goose Bay) floodplain investigation, Environment Canterbury, 2019	• The scope of this report is the Ote Makura (Goose Bay) floodplain • Modelling was used to determine the likely extent and depth of flooding on the Ote Makura floodplain for 50 and 500 year ARI events.
Active faults	**Updated Assessment of Active Faults in the Kaikōura District** GNS Science, 2019	• Updated fault awareness areas for Kaikōura, refinements based on actual fault ruptures in 2016 • 15 FAAs provided (faults or sections of) based on new or existing information, at 1:250,000 • 12 FAZs for faults (or sections of) generated.
	General Distribution and characteristics of active faults and Folds in the Kaikōura District, North Canterbury GNS Science, 2015	• Mapped known and suspected active faults in the Kaikōura District at a scale of 1:250,000. Part of wider fault mapping programme across Canterbury • Compiled and reviewed existing 1:250,000 scale fault info. No new field mapping. • Each fault was assigned level of certainty (definite, likely or possible), surface form (well, moderately or not expressed), and recurrence interval
Liquefaction	**Liquefaction Study for Kaikōura District,** Golder 2019	• Covers the entire Kaikōura District • Summarises the methodology used to delineate liquefaction assessment zones and how this information can be used in planning. • This report is intended to be used by territorial authorities for district planning and the risk minimisation of liquefaction • Three tiers of investigation a. Liquefaction possible – in depth soil analysis recommended b. Liquefaction unlikely but possible – desktop assessment recommended c. Liquefaction unlikely – standard procedure to test good ground (NZS3604) recommended
Slope instability/	**Deterministic mapping of potential landslide debris inundation in the**	• This report details phase one of the project which is to provide a district scale

Natural hazard	Title and author	Summary
Debris inundation	**Kaikōura District – GNS Science Consultancy Report 2019/102**	deterministic assessment of the locations within the project area that could be potentially affected by landslides • Report focuses on both slippage and falling debris hazards. • This report provides recommendations for land use and district planning.

1.6 Community engagement and communications

The plan change project was designed to encourage participation and involvement from stakeholders and members across the community. both formal and informal community engagement has been undertaken as part of the plan change process involving key stakeholders and the local community.

This is reflected in the project structure that was established for the plan change, and the non-statutory community process that was undertaken in 2019 and 2020.

The project structure that was established is shown in figure 1 below. In particular the three groups on the right hand side of the document involve community: Advisory Group, Te *Rūnanga* o *Kaikōura*, and the Community.

The consultation process implemented throughout the Natural Hazards Plan Change 3 has fulfilled the Council's obligations under s82 of the Local Government Act.

Figure 1: Structure of the plan change project

Natural Hazards Advisory group

The Kaikōura Natural Hazards Advisory Group (NHAG) was established to provide advice to the Council throughout the Natural Hazards Plan Change 3 process.

The objectives of the NHAG were to explore planning to meet the communities present and foreseeable future needs. In addition to statutory requirements under the Resource Management Act and Canterbury Regional Policy Statement, the NHAG was to assist with public awareness and understanding of natural hazards within the District and to provide community driven solutions.

The NHAG was established to include up to 16 representatives from community groups and government agencies. Members were invited to join as follows. Five meetings were held in total throughout 2019 and 2020. For full details on the Natural Hazards Advisory Group, refer to appendix 2.

Te *Rūnanga* o *Kaikōura*

Te *Rūnanga* o *Kaikōura* (TRoK) were invited to participate in this plan change on numerous occasions. The Rūnanga were formally consulted during the clause 3 consultation phase. A meeting was held on the 14th February 2021 with Council staff and members of the Rūnanga as an opportunity for Rūnanga members to comment and give feedback on the Natural Hazards Plan Change 3.

Communications

A comprehensive communications strategy supported the natural hazard plan change project and its associated community engagement activities. Below is a summary of communications activities undertaken in 2019 and 2020 (for further detail on the communications strategy see Appendix 1):

- Kaikōura District Council website, including district plan page, latest news
- Kaikōura District Council electronic newsletter (monthly), and hard copy newsletters
- Facebook posts
- Advertisements in the Kaikōura Star
- Media releases, and interviews with journalist at Kaikōura Star
- Rates inserts
- Publications including flyers, posters
- Community risk workshops
- Library display
- Letter sent out to 2065 properties within natural hazard overlays
- Natural hazards display in the Council office. Enlarged maps of natural hazard overlays displayed. Technical reports, frequently asked questions displayed and computer with interactive hazard overlay map available.
- Drop in sessions with community following letter sent out to property owners

Community

The community risk workshops, and policy options workshops were supported by a comprehensive communications campaign designed to raise awareness and encourage people to participate in the process and attend the community workshops.

Risk workshops

Views expressed through the public consultation have helped to shape the policy approach towards the proposed natural hazards provisions. More information on the community workshops can be found in appendix 2.

Table 3 Workshop 1 6-9th November 2019

Location	Number of attendees
Kaikōura township (public)	11
Kekerengū	0
Goose Bay (public)	3
Natural hazards advisory group	7
Kaikōura youth group	11
Kaikōura District Council councillors	7
Total number of attendees	38

Table 4: Workshop 2 30th November 2019

Location	Number of attendees
Kaikōura Township (public)	11
Natural Hazards advisory group	10
Kaikōura District Council councillors	5
Total number of attendees	26

Conclusions and limitations of the workshops

The results give an indication of community views on and perceptions of natural hazard risk, tolerance and tolerance thresholds in relation to natural hazard risk. They also give an indication of community views of what could be an appropriate policy/planning approach for managing natural hazard risk (in relation to flooding, active faults, liquefaction and debris inundation) via the district plan.

Taken together, the results of Workshop 1 and Workshop 2 indicate a consistent view that certain natural risks are intolerable and should be more tightly controlled by the district plan. This was the case for some of the debris inundation and active faults scenarios, in particular in relation to new habitable buildings, residential subdivision, visitor's accommodation, commercial/industrial buildings and subdivisions and community facilities. Conversely the workshops' results indicate a consistent view that certain natural hazard risks are more tolerable, and it is appropriate for less control over activities via district plan provisions. This was the case for development in areas subject to moderate flooding and low likelihood debris inundation, but also for activities such as non-habitable buildings (farm sheds, milking sheds) subject to natural hazards.

The main limitations of the workshops were the numbers of attendees, and the high level / generality of the information used. A relatively small number of attendees participated in the workshops, especially the public sessions. The high level / generality of the information used, such as the scenarios, meant that the risk assessment process did not address all the complexities relating to the natural hazards or managing natural hazard risk, nor all possible scenarios. However, despite the limitations of the workshops, the results can still be used as an indication of views and perceptions that may be held in the community (as opposed to a representative sample).

Clause 3 consultation

Under the RMA schedule 1, local authorities are required to consult with parties set out in clause 3. On the 3rd December 2020, the Council undertook clause 3 consultation with the following parties:

- Environment Canterbury
- Te Rūnanga *o* Kaikōura
- The Natural Hazards Advisory Group
- Hurunui District Council
- Marlborough District Council
- KiwiRail
- Minister for the Environment
- Minister for Economic and Regional Development
- Minister of Economic and Regional Development
- Minister for Biosecurity

- Minister of Conservation
- Minister of Foreign Affairs
- Federated Farmers New Zealand

The parties were supplied with the plan change and a timeframe for providing their comments 5th of February). The DPWG (District Plan Working Group) reviewed the comments received and made amendments to the plan change as necessary. The full table of feedback is set out in appendix 3.

1.7 Iwi Authority Advice and Feedback

Clause 3(1)(d) of Schedule 1 of the RMA sets out the requirements for local authorities to consult with iwi authorities during the preparation of a proposed plan. Clause 4A requires the District Council to provide a copy of a draft proposed plan (or plan change) to iwi authorities and have particular regard to any advice received. This section summarises the consultation feedback/advice received from Te *Rūnanga* o *Kaikōura*, the local iwi authority (as required by Section 32(4A)(b) of the RMA), that feedback/advice.

Table 5: Consideration of advice/comments from Iwi Authority

Date	Iwi Authority	Advice/comments Received	Consideration of, and the Council response to advice/comments
14.02.2021	Te Rūnanga o Kaikōura	*Question raised about whether if faults will always rupture in the same place.*	More of a question for GNS Science as a technical question, but yes. Faults tend to rupture in the same locations however not all locations are known
		Question raised around why sea level rise had not been included	Sea level rise is not included in the Natural Hazards Plan Change 3 as the science and technical information was not able to be provided in time for this review.
		Questions around what the specific rules of the plan change were	Set of plan change rules were emailed to the Rūnanga during clause 3 consultation phase. Copies of track changed rules were also provided for review. In addition, the Council provided an overview of the rules in meeting held on 14.02.21.
		Question around the Rūnanga involvement in hearing	KDC are happy for Rūnanga to be involved in hearing. The Rūnanga can make a submission provided the person from Rūnanga hearing was not involved in the submission. To have the person making the submission sit in on the hearing would be a conflict of interest.
		Concern around cost to people wishing to subdivide and who should meet these costs	Discussion occurred around whether it should be ratepayers or developers should meet the costs. It was explained by Council staff that future work was being undertaken with GNS Science but that current focus was on the developer providing additional information as opposed to the costs falling to the ratepayer. Council staff iterated that $80,000 operational spend is a 1% increase in rates for all ratepayers and a question around what ratepayers funds should be spent on.

2. STATUTORY AND POLICY CONTEXT

This section summarises the statutory and policy context for natural hazards that are relevant to KDC's natural hazards plan change. Note that coastal hazards are not within the scope of the Natural Hazards Plan Change 3.

RMA definition of natural hazard

Section 2 of the RMA defines a natural hazard as:

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

Table 6: Higher Order Planning Documents

	Document	Relevant provisions	How the natural hazards chapter will take into account/give effect to the relevant provisions
a.	**RMA, Part 2, Section 5**	Section 5 of the RMA sets out the purpose of the Act, which is to promote the sustainable management of natural and physical resources. Sustainable management is defined as: *…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 health and safety while –* *(a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generation; 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.*	The plan change seeks to manage adverse effects natural hazards may have The plan change seeks to manage and mitigate risk to an acceptable level or avoid development in high hazard areas or where risk to human life and property is compromised. The plan change considers the social, cultural and economic impacts that natural hazard events potentially can impact upon.

b.	**RMA, Part 2, Section 6**	Section 6 of the Act identifies matter of national importance that must be recognised and provided for, including: *(h) The management of significant risks from natural hazards.* The RMA was amended in 2018 to include the management of significant risks from natural hazards as a matter of national importance (Section 6(h)). Under section 6, all persons exercising functions and powers under the RMA must recognise and provide for the matters of national importance, including the management of significant risks from natural hazards. The plan change takes a risk based approach in regard to natural hazards and directs how natural hazards will be planned for and managed.	
c.	**RMA, Part 3, section 7**	Section 7 of the Act identifies other matters that particular regard must be had to in achieving the purpose of the Act. The Section 7 matters most relevant to natural hazards are: *(i) The effects of climate change.* The modelling upon which the provisions are based take into account the effects of climate change, which enables the efficient use and development of natural and physical resources. Based on International Panel for Climate Change (IPCC) advice, the flooding assessments will incorporate climate change predictions.	The flood modelling data uses climate change predictions which will be utilised throughout the rule framework.
d.	**RMA, Part 3, Section 8**	Section 8 requires that the principles of the Treaty of Waitangi (Te Tiriti o Waitangi) be taken into account when undertaking functions and powers under the Act.	Iwi have been invited to participate though out the plan change process. Te Rūnanga o Kaikōura were formally consulted during preparation of the plan change. Iwi feedback and comments can be found in section 1.7 of this report.
e.	**RMA, Part 3, Section 10**	*Section 10*	The rule framework applies to new land use and development. The framework is not designed to apply

		Certain existing uses in relation to land protected *(1) land may be used in a manner that contravenes a rule in a district plan or proposed district plan if –* *(a) either –* *(i) the use was lawfully established before the rule became operative or if the proposed plan was notified; and* *(ii) the effects of the use are the same or similar in character, intensity, and scale to those which existed before the rule became operative or the proposed plan was notified* *(b) or –* *(i) the use was lawfully established by way of a designation; and* *(ii) the effects of the use are the same or similar in character, intensity, and scale to hose which existed before the designation was removed* *(2) Subject to sections 357 to 358, this section does not apply when a use of land that contravenes a rule in a district plan or a proposed district plan has been discontinued for a continuous period of more than 12 months after the rule in the plan became operative or the proposed plan was notified unless—* *(a) an application has been made to the territorial authority within 2 years of the activity first being discontinued; and* *(b) the territorial authority has granted an extension upon being satisfied that—* *(i) the effect of the extension will not be contrary to the objectives and policies of the district plan; and*	to previously existing buildings and dwellings within the natural hazard overlays.

		(ii) the applicant has obtained approval from every person who may be adversely affected by the granting of the extension, unless in the authority's opinion it is unreasonable in all the circumstances to require the obtaining of every such approval.	
	RMA, Part 4, Section 31	Within Part 4, section 31 of the Act identifies the functions of territorial authorities. Section 31(1)(a) requires territorial authorities to: *establish objectives, policies, and methods to achieve integrated management of the effects of the use, development, or protection of land and associated natural and physical resources of the district*. Of particular relevance to the Natural Hazards Plan Change 3, Section 31(1)(b)(i) specifically requires territorial authorities to: *control any actual or potential effects associated with of the use, development, or protection of land for the purpose of avoidance or mitigation of natural hazards*	The plan change seeks to avoid land use, development and subdivision in high hazard areas, as set out in the planning maps, titled Proposed District Plan Map Series.
	RMA, Part 5, Section 75	Section 75(3)(a)-(c) of the Act states that a district plan must give effect to any national policy statement, any New Zealand coastal policy statement, any national planning standard and any regional policy statement.	The Canterbury Regional Policy statement is relevant to the Natural Hazards Plan Change 3 is described in further detail below. Section 75(4) of the Resource Management Act states that a district plan must not be inconsistent with a regional plan. The Natural Hazards Plan Change 3 seeks to be consistent with the CRPS as set out below.
	CRPS, Chapter 11	***Objective 11.2.1 Avoid new subdivision, use and development of land that increases risks associated with natural hazards.***	The Natural Hazards Plan Change 3 must give effect to the CRPS. The natural hazards chapter provides a framework of objectives, policies and rules that seek to address natural hazards where technical information

		New subdivision use and development of land which increases the risk of natural hazards to people, property and infrastructure is avoided or, where avoidance is not possible, mitigation measures minimise such risks. ***Objective 11.2.2. Adverse effects from hazard mitigation are avoided or mitigated*** *Adverse effects on people, property, infrastructure and the environment resulting from methods used to manage natural hazards are avoided or, where avoidance is not possible, mitigated.* ***Objective 11.2. 3 – Climate change and natural hazards*** *The effects of climate change, and its influence on sea levels and the frequency and severity of natural hazards, are recognised and provided for.* **Policy 11.3.*1* – *Avoidance of inappropriate development in high hazard areas*** *To avoid new subdivision, use and development (except as provided for in Policy 11.3.4) of land in high hazard areas, unless the subdivision, use or development:* *1. is not likely to result in loss of life or serious injuries in the event of a natural hazard occurrence; and* *2. is not likely to suffer significant damage or loss in the event of a natural hazard occurrence; and* *3. is not likely to require new or upgraded hazard mitigation works to mitigate or avoid the natural hazard; and* *4. is not likely to exacerbate the effects of the natural hazard; or* *…..* ***Policy 11.3.2 – Avoid development in areas subject to inundation*** *In areas not subject to Policy 11.3.1 that are subject to inundation by a 0.5% AEP flood event; any new subdivision, use and development (excluding critical infrastructure) shall be avoided unless there is no increased risk to life, and the subdivision, use or development:* *1. is of a type that is not likely to suffer material damage in an inundation event; or* *2. is ancillary or incidental to the main development; or*	suggests that the risk is unacceptable to human life and property. The policies are supported by rules which apply a non-complying activity status within high hazard areas outside of urban areas. A more permissive rule regime is in place for activities that present an acceptable risk to human life and property, where floor levels meet the minimum accepted level as shown in a Flood Assessment Certificate. Policy 11.3.1 in the CRPS generally directs that development must be avoided in high hazard areas but provides for limited provisions in existing urban areas. Policy 8.3.11 and rule 8.5.3 gives effect this policy as it sets out that development in High Hazard areas outside of non-urban areas should be avoided. Meanwhile policy 8.3.10 and rule 8.5.2 have some provisions for development in high hazard areas inside urban zoned land. Policy 11.3.2 in the CRPS direct that development is to be avoided in areas subject to inundation, unless risk can be managed or mitigated to an acceptable level. Under objective 8.2.1, policy 8.3.13 directs that land use and development is avoided for Hazard sensitive buildings in the in the Debris Flow Fan Overlay and Landslide Debris Inundation Overlay. Rule 8.5.4 sets out that a new hazard sensitive building within the Debris Flow Fan and Landslide Debris Inundation overlays are a restricted discretionary activity.

		3. *meets all of the following criteria:* a. *new buildings have an appropriate floor level above the 0.5% AEP design flood level; and* b. *hazardous substances will not be inundated during a 0.5% AEP flood event;* *provided that a higher standard of management of inundation hazard events may be adopted where local catchment conditions warrant (as determined by a cost/benefit assessment).* *When determining areas subject to inundation, climate change projections including sea level rise are to be taken into account.* ***Policy 11.3.3 – Earthquake hazards*** *New subdivision, use and development of land on or close to an active earthquake fault trace, or in areas susceptible to liquefaction and lateral spreading, shall be managed in order to avoid or mitigate the adverse effects of fault rupture, liquefaction and lateral spreading* ***Policy 11.3.4 – Critical infrastructure*** *New critical infrastructure will be located outside high hazard areas unless there is no reasonable alternative. In relation to all areas, critical infrastructure must be designed to maintain, as far as practicable, its integrity and function during natural hazard events.* ***Policy 11.3.5 – General risk management approach*** *For natural hazards and/or areas not addressed by policies 11.3.1, 11.3.2, and 11.3.3, subdivision, use or development of land shall be avoided if the risk from natural hazards is unacceptable. When determining whether risk is unacceptable, the following matters will be considered:* 1. *the likelihood of the natural hazard event; and* 2. *the potential consequence of the natural hazard event for: people and communities, property and infrastructure and the environment, and the emergency response organisations.* *Where there is uncertainty in the likelihood or consequences of a natural hazard event, the local authority shall adopt a precautionary approach.*	The policy in the CRPS with the most relevance to liquefaction is 11.3.3 Earthquake hazards which directs that land susceptible to liquefaction and lateral spreading be managed in order to mitigate adverse effects. Rule 13.11.1 gives effect to this and it manages subdivisions within the Liquefaction Hazard Overlay. In the CRPS, policy 11.3.4 manages critical infrastructure which directs that new critical infrastructure be located outside of High Hazard Areas unless there are no reasonable alternatives. Policy 8.3.8 gives effect to this as it directs that critical infrastructure be located outside of High Hazard Areas, unless for operational or functional reasons or is impractical to locate elsewhere. Rule 8.5.9 sets out that new critical infrastructure in a High Hazard Area as a restricted discretionary activity, as directed by the CRPS. The CRPS does not directly have policies that relate to debris flow fans and landslide debris inundation, however policy 11.3.5 in the CRPS directs management of natural hazards not outlined in 11.3.1, 11.3.2 and 11.3.3. it sets out that development should be avoided if the risk from natural hazards is unacceptable. Policy 8.3.13 gives effect to 11.3.5 and it manages development within the Debris Flow Fan and Landslide Debris Inundation Overlays. Policy 11.3.6 in the CRPS recognises the role of natural features in managing natural hazards. Policy 8.3.5 in

		Formal risk management techniques should be used, such as the Risk Management Standard (AS/NZS ISO 31000:2009) or the Structural Design Action Standard (AS/NZS 1170.0:2002). ***Policy 11.3.6 – Role of natural features*** *The role of natural topographic (or geographic) and vegetation features which assist in avoiding or mitigating natural hazards should be recognised and the features maintained, protected and restored, where appropriate.* ***Policy 11.3.7 – Physical mitigation works*** *New physical works to mitigate natural hazards will be acceptable only where:* *1. the natural hazard risk cannot reasonably be avoided; and* *2. any adverse effects of those works on the natural and built environment and on the cultural values of Ngāi Tahu, are avoided, remedied or mitigated.* *Alternatives to physical works, such as the relocation, removal or abandonment of existing structures should be considered.* *Where physical mitigation works or structures are developed or maintained by local authorities, impediments to accessing those structures for maintenance purposes will be avoided.* ***Policy 11.3.8 – Climate change*** *When considering natural hazards, and in determining if new subdivision, use or development is appropriate and sustainable in relation to the potential risks from natural hazard events, local authorities shall have particular regard to the effects of climate change.* ***Policy 11.3.9 – integrated management of and preparedness for natural hazards*** To undertake natural hazard management and preparedness for natural hazard events in a coordinated and integrated manner by ensuring that the lead agencies have particular regard to: 1. the investigation and identification of natural hazards; 2. the analysis and mapping of the consequential effects of the natural hazards identified; 3. the effects of climate change and resulting sea level rise;	the plan change gives effect to policy 11.3.6 in the CRPS. It provides for the recognition of natural features which may assist in reducing the adverse effects of natural hazards. Policy 11.3.7 in the CRPS sets out that physical mitigation works be acceptable only where the risk cannot be avoided and the adverse effects of the risk are avoided, remedied, and mitigated. Also, any adverse effects on cultural values of Ngāi Tahu are avoided, remedied, or mitigated. Policy 8.3.4 in the plan change gives effect to the CRPS as it essentially mirrors policy 11.3.7. Policy 11.3.8 sets out that territorial authorities need to have regard towards climate change. There is no direct policy around climate change in the Natural Hazards Plan Change 3. But the rule framework does account for climate change predictions. Part of this policy relates to climate change and coastal hazards, which is out of scope for this plan change and will be addressed at a later date once the technical reports have been completed.

		4. the setting of standards and guidelines for organisations involved in civil defence and emergency management; 5. the development and communication of strategies to promote and build community resilience; and 6. any other matters necessary to ensure the integrated management of natural hazards in the Canterbury region	

2.1.4 National Planning Standards

National Direction must be given effect to in RMA plans. New National Planning Standards came into effect and set out requirements for Regional Policy Statements (RPSs) and regional and district plans to provide national consistency and support implementation of the RMA and higher order documents.

As stated in section 1.2.1 of this report, Kaikōura District Council is undertaking a rolling review of the District Plan, beginning with the natural hazards chapter. It is anticipated the rolling review of the District Plan will be completed within ten years.

While plan changes such as KDC's Natural Hazards Plan Change 3 don't need to be in the format and structure of planning standards, it makes sense to draft the plan change in a way that they can dovetail into a reviewed plan that is in accordance with the planning standards where possible, without substantive changes.

The following standards are relevant to the Natural Hazards Plan Change 3.

Standard 7 provides guidance on plan structure in relation to natural hazards, stating:

10. If provisions relating to natural hazards are addressed (except coastal hazards), they must be located in the Natural hazards chapter.

11. The Natural hazards chapter must include cross-references to any coastal hazards provisions in the Coastal environment chapter.

18. overlays

Overlays	*An overlay spatially identifies distinctive values, risks, or other factors which require management in a different manner from underlying zone provisions.*	*District-wide matters chapters for district plans* *Domain and topic chapters for combined plans with a district component*

2.1.5 National guidance

There are several guidance documents published by the Ministry for the Environment that address hazard management and provide guidance for local authorities in regard to land use planning and district planning. A number of these documents provide specific advice to managing hazards, which can aid in drafting natural hazard provisions.

Table 7- National Guidance

Natural hazard	**Relevant planning documents**	**Summary**
Planning for fault rupture	*Planning for Development on Landon or close to active faults, MfE, 2003*	Document aims to assist local authorities minimise risk hazard and the time it takes for individuals, communities and governments to recover from fault rupture, and to assist planner to avoid or mitigate fault rupture hazard.
	Building Act 2002	In conjunction with planning documents
Planning for liquefaction prone land	Planning for engineering guidance for potentially liquefaction prone land. *Ministry for the Environment* (2007).	Aims to help authorities plan for land use, development and subdivision on land that is prone to liquefaction. The document follows a risk based identification process
Planning for flooding	Preparing for future flooding: a guide for Local Government in New Zealand. *Ministry for the Environment (2009)*	Directs a risk based approach to flood management, taking both consequences and likelihood into account
Planning for landslides and debris flow fans	No national guidance on planning for landslides and debris flow fans	

2.2 Iwi Management Plan

The Mahaanui Iwi Management Plan 2013 is relevant to the Natural Hazards Plan Change 3. While the Iwi Management Plan does not specifically focus on natural hazards, Issue R3 recognises that climate change could have significant impacts on the relationship of Ngāi Tahu and their culture and traditions with their ancestral lands, water, sites of significance, wāhi tapu and other taonga, particularly in the coastal area. Policy R3.3 requires that local authorities recognise and provide for the potential effects of climate change on resources and values of importance to Ngāi Tahu. The Iwi Management Plan also identifies fracking as an issue due to its potential to generate earthquakes.

2.3 Relevant Management Plans and Strategies

The following management plans and strategies are relevant to this matter:

Table 8 – List of relevant plans and strategies.

Long Term Plan	• The long-term plan represents the next steps in Kaikōura's future and sets direction for the District
Canterbury CDEM Group Plan 2014 (amended 2018)	• Promotes a risk-based approach. • Identifies high priority hazards for the region, including earthquakes, tsunami (local or regional source), and flooding (including dam failure).
Canterbury Regional River Gravel Management Strategy – Environment Canterbury 2012 https://ecan.govt.nz/document/download/?uri=1734957	• Provides the management framework for gravel extraction (including on the Waimakariri River) as a method to manage flood hazard.
Flood Protection and Drainage Bylaw 2013 (amended 2019) – Environment Canterbury. https://www.ecan.govt.nz/document/download?uri=3529046	• Provides for the ongoing management and efficient operation of flood protection and flood control works that are owned or controlled by the Canterbury Regional Council.
Reimagine Kaikōura, Kaikōura District Council Recovery Plan 2017	• Looks at four aspects of recovery; community recovery; economic recovery; built environment recovery; and natural environment recovery.

	Document also looks at resilience within the community
Ngai Tahu Climate Change Strategy	• Sets direction for management of climate change • Focuses on reduction of greenhouse gases • Assists in understanding challenges and changes that climate change brings • Priorities for short term and long term actions

2.4 Other Relevant Legislation or Regulations

While the RMA is the key piece of legislation under which land use planners manage natural hazard risk, the following legislation are relevant to this matter:

- Building Act 2004
- Civil Defence Emergency Management Act 2002 (CDEM Act)
- Local Government and Official Information and Meeting Act 1987 (LGOIMA)
- Local Government Act 2002 (LGA).

2.4.1 Building Act 2004

The Building Act seeks to ensure the safety and intended performance of any building constructed. Therefore, Council also has responsibilities in relation to the management of natural hazard risk under the Act and the Building Code regulations established under it.

The Act defines a natural hazard to mean:

- Erosion - including coastal erosion, bank erosion, and sheet erosion
- Falling debris - including soil, rock, snow, and ice
- Subsidence
- Inundation - including flooding, overland flow, storm surge, tidal effects, and ponding
- Slippage

Section 71 of the Building Act requires councils to refuse consent for the construction of a building or major alterations on land that is subject to natural hazards, where the proposed works will accelerate, worsen, or create a hazard on that land or any other property, unless adequate mitigation measures are taken. However, Section 72 does allow council to grant building consent for land subject to natural hazards where it is considered that the works will not accelerate, worsen, or create a hazard. In these situations, the property owner takes on the risk, which is recorded on the title for the property through procedures under Section 73 of the Act.

Recent changes to the Building Act have extended the requirements in relation to residential construction on liquefaction prone land that were introduced for the Canterbury region following the 2010-2011 earthquakes to the remainder of New Zealand. This means that Council are required to map liquefaction prone areas, and new dwellings in these areas will be required to have a specific foundation design to mitigate the effects of liquefaction and lateral spread.

2.4.2 Civil Defence Emergency Management Act 2002

The CDEM Act sets out the duties, responsibilities and powers of central and local government, lifeline utilities and emergency services. It establishes an 'all-hazards' approach that seeks to achieve the sustainable management of hazard risk through the '4R's' of reduction, readiness, response and recovery. It is under this Act that CDEM Groups are required for each region, and each must prepare a CDEM Group Plan that details how the risks that threaten their region will be managed.

2.4.3 Local Government and Official Information and Meeting Act 1987

Under the LGOIMA Land Information Memoranda (LIM) reports are produced by district councils. Councils have an obligation under the Act to include on a LIM any information known about a site, that is not provided in the district plan, including natural hazards.

2.4.4 Local Government Act 2002

The LGA requires that when performing its role, local government shall have particular regard to the avoidance and mitigation of natural hazards for its infrastructure. The Long Term Plan (LTP) prepared under the LGA must cover a period of at least 10 years and provide for integrated and co-ordinated decision-making. It is through the LTP and asset management planning process that Council decides what level of natural hazard protection their assets are to provide (in the case of flood protection and erosion control works) or what level of event they are to withstand (in the case of network infrastructure).

2.5 Plans of Adjacent Territorial Authorities

The District Council is required to have regard to the extent to which the district plan needs to be consistent with the plans and proposed plans of adjacent territorial authorities under s74(2)(c) of the RMA. Both the Christchurch and Hurunui District Plans take a risk-based approach to the management of natural hazards, and the Selwyn District Council is in the process of updating their District Plan to also take this approach.

The proposed approach is consistent with the District Plans of adjoining territorial authorities in the following ways:

- Requirement for a Minimum Floor Level Certificate to be issued for new buildings, or additions to existing buildings within the Flood Management Area for Hazard Sensitive Activities in all Flood Hazard overlay areas in the Kaikōura District
- Plan uses a 500 year ARI
- Activities in areas subject to liquefaction are permitted provided maximum size requirements are met, with subdivision being a controlled or discretionary activity.

The Natural Hazards Plan Change 3 takes a risk-based approach to the management and mitigation of natural hazard risk. This will ensure that the Kaikōura District Plan is consistent with those of adjoining territorial authorities by giving effect to higher order policy and aligning with national best practice on natural hazards.

3. KEY ISSUES

Key issues are those that the proposed plan change sets out to address. These issues can be resource management issues, or other issues as outlined below. The key issues that the Natural Hazards Plan Change 3 sets out to address have been identified through:

- New technical information
- Monitoring and review of current district plan
- Issues identified in other documents and plans, including those described above.
- Analysis of higher order statutory requirements and guidance for the management of natural hazard risk
- Input from technical expert hazard assessments including flood modelling, geotechnical, and fault hazard risk assessment

• 3.1 Resource management issues

Resource management issue 1 – Climate Change Climate change is expected to increase rainfall and storm weather events. Climate change has the potential to increase severity in some natural hazards district wide. The operative plan does not incorporate climate change predictions into the current rule framework. Under higher order documents, provisions for natural hazards must take into account climate change.
Climate change will be incorporated into the policy and rule framework. The provisions for the Natural Hazards Plan Change 3 incorporated climate change into the rule framework. It is anticipated that climate change will exacerbate weather patterns and storm surges. Climate Change predictions have been included in flood modelling, which will translate into the Flood Assessment Overlay within the Planning Map. These predictions have been included into flood modelling using IPCC (International Panel of Climate Change) advice.
Resource management issue 2 – Natural Hazard Risk The risk of natural hazards creates numerous flow on effects. Natural hazards are a district wide issue that has potential to impact on individuals, property and the community as a whole. Natural hazards can be unpredictable and difficult to model. The science is not always exact and there is a level of uncertainty. The majority of the Kaikōura district has the potential to be affected by at least one natural hazard. Much of the developed areas are in close proximity to areas potentially susceptible to flooding, inundation and fault rupture. The risk workshops demonstrated acceptable and unacceptable.

Natural hazard events can also adversely affect the community's health and wellbeing.
After the Kaikōura 7.8m Earthquake in 2016, there has been a heightened awareness of natural hazards events and the risk they pose to human life, property and infrastructure. The Natural Hazards Plan Change 3 seeks to address natural hazard risk though the policy and rule framework. The framework takes a risk based approach which intends to manage and mitigate risk to an acceptable level and avoid development and subdivision in High Hazard Areas. The rule framework is centred around acceptable and unacceptable risk. The rule framework provides for development in areas considered to be lower in risk where the risk is acceptable. The rule framework directs that development on land is discouraged in areas that are considered to be high hazard, where the risk to life and property is unacceptable. A key issue for the district plan is to identify the risk that different natural hazards have and how best to plan for them. Management and mitigation are two of the ways the rule framework will direct in planning for natural hazards. Avoidance of land use, development and subdivision is another effective means of reducing risk in high hazard areas. **Wildfire** The risk of wildfire has been considered within the scope of this plan change. Wildfire has been included in the rule framework which introduces setback zones of 30m between a hazard sensitive building and forestry plantation, woodlots, and shelterbelts. **Liquefaction Hazards** The liquefaction risk in the Kaikōura District is generally not high. the M7.8 2016 Earthquake saw smaller, localised pockets of liquefaction and presents a lower risk to human life. Widespread liquefaction, like what was seen in the Christchurch 2010-2011 earthquakes was not evident in Kaikōura. The Building Act largely captures liquefaction hazards, so the Natural Hazards Plan Change 3 incorporates management of liquefaction hazard falls solely to subdividing with a hazard sensitive building. A liquefaction investigation has been carried out by Golder Associates which builds on a previous liquefaction investigation. The Liquefaction Hazard Overlay on the planning map will support the planning framework which sets out which properties have potential to be susceptible to liquefaction during an earthquake event. The rule framework will set out management of liquefaction hazards. **Fault rupture** Kaikōura has a number of fault lines running through the District. some of these fault lines are prone to rupture which poses a risk to people and property. Damage to property from fault rupture was evident during and after the 2016 M7.8 Kaikōura earthquake event.

The Natural Hazards Plan Change 3 incorporates fault rupture information from a technical report which has been used to create a Fault Avoidance Overlay and Fault Awareness Overlay on the planning map. These two overlays will set out where risk should be managed and mitigated to an acceptable level.

Flooding

The Kaikōura District has an extensive history of significant flood events. Much of the district is in close proximity to low lying, coastal areas that are prone to flooding.

In High Hazard areas, a higher level of restriction is required in regards and land use, development and subdivision under the RMA and the CRPS. High hazard areas are within the Flood Assessment Area where the depth x velocity of floodwater in a 500-year ARI flood event which is greater than or equal to 1. These areas are considered to be of high-level risk in terms of potential loss of life and damage to property. The Natural Hazards Plan Change 3 will implement a set of policies and rule which seek to manage and mitigate flooding risk in urban areas and avoid development in non-urban high hazard areas.

The Flood Hazard Assessment overlay is within the 500-year ARI and is identified through LiDAR. This modelling covers the Kaikōura District. the rule framework has been developed to manage flood risk in the Flood Assessment Areas.

The Natural Hazards Plan Change 3 will use a certificate approach for properties within the Flood Assessment Area to determine whether a resource consent is needed or not.

Debris flow fans

There are some uncertainties around the science behind debris flow fans however are considered to be significant in terms of potential risk to human life and property. Debris flow fans on the planning map are labelled as the Debris Flow Fan Overlay, where models project land that may be susceptible to the hazard. The data has been gathered using LiDAR and aerial imagery.

Landslide debris inundation

The M7.8 2016 Earthquake saw significant land failures due to landslides caused from ground shaking. Some properties in the Kaikōura District were inundated with landslide debris. Landslide debris inundation poses a risk to both people and property. The Natural Hazards Plan Change 3 utilises a landslide debris inundation overlay to identify areas in the district that may be susceptible to debris inundation from landslides. This has been done at a district wide scale.

3.2 Other key issues to be addressed

Other key issues to be addressed by the Natural Hazards Plan Change 3 include:

- The rules in the operative plan mainly focus on flood hazards. However, the operative rule framework does not provide a clear and consistent approach to managing this hazard, with different criteria applicable to different areas.
- New natural hazard information for flooding, active faults, liquefaction hazards and coastal inundation needs to be incorporated into the District Plan. The District Plan maps also need to be updated to map these hazard areas, as they currently only show an outdated flood hazard overlay which only covers localised parts of the district. it is anticipated the Natural Hazard Overlays will be broader but will cover the district as opposed to only a small portion of the district.
- There is a gap in community perception and understanding of natural hazards. The Natural Hazards Plan Change 3 seeks to address this through the use of the Natural Hazard Overlays as identified on the planning map. The planning map aims to clearly show which areas in the district have the potential to be affected by natural hazards and the rule framework sets out how each Natural Hazard Overlay will be managed.

4. OVERVIEW OF PROPOSED OBJECTIVES, POLICIES AND METHODS

4.1 The overall approach

- **Risk-based approach** – Provisions aim to increase certainty and seek to manage and mitigate risk to an acceptable risk level or avoid land use, development, and subdivision in High Hazard Areas. The natural hazards within the scope of the Natural Hazards Plan Change 3 are flooding, fault rupture, liquefaction, landslide debris inundation, debris flow fans and wildfire. The approach generally allows activities where the risk is low or can be adequately mitigated (e.g. setting of minimum floor levels to reduce flood risk), while seeking to control activities where the risk posed is high.
- **Community feedback –** The plan change process has encouraged community feedback using workshops, drop in sessions, feedback and online resources. As well as this, Kaikōura District Council have engaged with the Natural Hazards Advisory Group with numerous workshops and meetings to encourage engagement within the community.
- **Accept/manage legacy issues –** The CRPS recognises that for existing urban areas the community has already accepted a degree of risk, and the ongoing development of these areas should be enabled where risk can be mitigated to an acceptable level, while new Hazard Sensitive development should be avoided in hazard overlays outside of existing urban areas.
- **Structure and format provisions** – To easily integrate with Planning Standards, to avoid needing to re-visit natural hazards provisions when the rest of the plan is reviewed to give effect to Planning Standards **Introduce new definitions** specific to Natural Hazards Plan Change 3 if needed, for consistency with Planning Standards
- **Climate change –** proposed provisions incorporate climate change predictions into the flood rule framework.

4.2 Proposed Natural Hazards objectives, policies and rules

Table 9: Proposed Natural Hazards objectives, policies and rules

Proposed objective	How policies will implement objectives
8.2.1 Risk from natural hazards New land use and development: 1. Is managed in the Urban Flood Assessment Overlay and ensures the risk to people and property is mitigated and the abilities of communities to recover from natural hazards is maintained 2. Is avoided in the High Flood Hazard Areas outside of the Urban Flood Assessment Overlay; and 3. Is managed in all other Hazard Overlays outside of High Flood Hazard Areas.	Objective 8.2.1 sets out that that natural hazards be managed and mitigated to acceptable levels in urban areas. It also sets out that development is avoided in non-urban areas within High Hazard Areas. The Natural Hazards Plan Change 3 is proposing a series of policies and rules to implement this objective. Policies 8.3.1 explains that natural hazards will identify areas susceptible to natural hazards through Hazard Overlays. It also acknowledges that climate change is considered. 8.3.2 states that the natural hazards chapter will take a risk-based approach to natural hazards management. From there, a series of policies to give effect to objective 8.2.1. Policy 8.3.10 directly relate to clause 1 of Objective 8.2.1 as it sets out the management of land use and development within the High Hazard Area within the Urban Flood Assessment Overlay. It determines that avoidance should be applied to land use and development unless risk can be adequately mitigated, or minimum floor levels have been incorporated into the design of the development. Policy 8.3.11 gives effect to clause 2 in Objective 8.2.1 as it manages High Flood Hazard Areas outside of the Urban Flood Assessment Overlay. This policy is more restrictive than Policy 8.3.10 as it takes a more avoid approach as opposed to mitigate and manage. Policy 8.3.12 gives effect to clause 3 of Objective 8.2.1 as it manages flooding outside of High Hazard Areas, where regulation is less strict. These policies use a certificate approach to determine flood risk. Policies 8.3.13, 8.3.14 and 8.3.15 relate to clause 3 in Objective 8.2.1 as they manage other hazards within the scope of the Natural Hazards Plan Change 3 outside of High Hazard Areas. Policy 8.3.13 manages the Debris Flow Fan Overlay and Landslide Debris Inundation Overlay. Policy 8.3.14 manages land use and development in the Fault Avoidance and Fault Awareness Overlays. Policy 8.3.15 is broad in nature as it considers other natural hazards not extensively managed in the rule framework. It sets out that other natural hazards such as wildfire should be considered.

	Policy 8.3.9 isn't attributed to an overlay as it directs management earthworks within all of the Hazard Overlays but intends to avoid adverse effects of displacement of floodwaters. Policy 8.3.3 gives effect to clause 3 in Objective 8.2.1 as it seeks to manage additions to buildings within all Hazard Overlays. This policy and rules are generally more permissive if additions to buildings do not change the onsite risk and offsite risk to life and property. Policies 8.3.4 and 8.3.5 are broader policies that seek to manage hazard mitigation works and natural features that provide natural hazard resilience.
8.2.2 Infrastructure 1. Upgrading maintenance and replacement of existing infrastructure and new non-critical infrastructure within all-natural hazard overlays is enabled where the infrastructure does not increase the risk to life or property from natural hazard events, or transfer the risk to another site; and 2. New critical infrastructure avoids High Flood Hazard Areas, but where this is not possible or is impractical, is designed to maintain its integrity and ongoing function during and after natural hazard events or can be reinstated in a timely manner.	Objective 8.2.2 directs that infrastructure be enabled within the natural hazard overlays given that the infrastructure doesn't increase risk to life or property, nor does it transfer risk to other sites. The objective also sets out that infrastructure be avoided in high hazard areas unless it is impractical to do so. A series of policies and rules relate to the management of infrastructure within the Hazard Overlays. Policy 8.3.6 gives effect to Objective 8.2.2 as it allows for existing infrastructure to operate, be maintained, replaced, repaired and removed within all Hazard Overlays. Policy 8.3.7 seeks to manage new and upgrading of non-critical infrastructure and directs a permissive approach within the Flood Hazard Assessment Overlay where risk of flooding is not increased. It provides that non-critical infrastructure be enabled to be developed within the other Hazard Overlays. Policy 3.8.3 has a more restricted approach as it relates to critical infrastructure. This policy particularly relates to clause 2 of Objective 8.2.2. It mirrors the wording of clause 2, asserting that critical infrastructure be avoided in high hazard areas unless it is impractical to do so. The policy also states that critical infrastructure be designed to maintain function and integrity during and after a natural hazard event.

4.3 Chapter 13: Subdivision

4.3.1 Proposed Policies and rules

One new subdivision policy, 13.2.2, which is a broad policy that captures the natural hazards within the scope of the Natural Hazards Plan Change 3. There are three new rules in Chapter 13: Subdivision 13.11.1, 13.11.2 and 13.11.4. The proposed rules in Chapter 13: Subdivision give effect to Policy 11.3.1 of the CRPS, which directs that activities should be avoided within Non-Urban High Hazard Areas. New hazard sensitive buildings identified within the Urban Flood Assessment Overlay must appropriately manage and mitigate adverse effects of the natural hazards within the scope of this plan change. For this reason, subdivision accommodates for Hazard Sensitive Activities in the High Flood Hazard Overlay (13.11.2), (elevating to a non-complying activity where matters of discretion are not complied with). This activity status allows for growth and development where the risk to life and property can be mitigated within the Urban Flood Assessment Overlay. In contrast, the subdivision of land for the purpose of accommodating Hazard Sensitive Activities that locates a building platform within a High Hazard Area outside of Urban Areas is a non-complying activity (13.11.4).

In the Natural Hazards Plan Change 3, a subdivision that proposes a new hazard sensitive building within the Fault Awareness Overlay (13.11.3) is a non-complying activity. This recognises the advice from expert evidence that there are no measures that can appropriately mitigate a fault rupture risk to development where positioned within a Fault Avoidance Zone. However, it may be possible to undertake a subdivision creating new lots within the Fault Awareness Overlay where risk has been assessed via geotechnical investigation and has risk has been mitigated. In this way the creation of unacceptable natural hazard risk is minimised, while still allowing future development where risk can be mitigated, which is implementing the direction that Policy 11.3.1 of the CRPS directs.

Subdivision for new hazard sensitive buildings (13.11.1) within the Liquefaction Hazard Overlay is managed as a controlled activity where matters of control are restricted to geotechnical recommendations from a site specific geotechnical assessment of liquefaction hazard, including testing of soils. Matters of control also include the location, size and design of the subdivision, roads, access, and services.

4.4 Other chapter amendments

Other chapters in the district plan have also been amended to reflect the new natural hazards provisions. Chapter 1 has been amended so that it sets out the natural hazards that are within the scope of the Natural Hazards Plan Change 3. The introduction now refers to fault rupture, liquefaction, landslide debris inundation, debris flow fans and wildfire in addition to flooding, high winds, over exposure to the sun and earthquakes.

Chapter 3: User's Guide has been amended to insert a new clause to include natural hazards.

Chapter 4: Definitions have been amended to include several new definitions. Some of these include definitions from the National Planning Standards, CPRS and the RMA.

- Average Recurrence Interval (ARI)
- Critical infrastructure
- Earthworks

- Hazard sensitive building
- High Flood Hazard Area
- Land Disturbance
- Liquefaction Hazard
- Natural hazard
- Natural Hazard Mitigation Works
- Natural Hazard Overlays
- Operational need
- Plantation forestry
- Structure
- Shelterbelt
- Woodlot

Chapter 7: Development and Tourism has been amended to extend the scope of the natural hazards that the Natural Hazards Plan Change 3 will cover.

5. SCALE AND SIGNIFICANCE EVALUATION

Section 32 (1)(c) of the RMA requires that a Section 32 report 'contain a level of detail that corresponds with the scale and significance of the environmental, economic, social and cultural effects that are anticipated from implementation of the proposal.

The scale and significance of environmental, economic social and cultural effects anticipated from implementation of Natural Hazards Plan Change 3 has been assessed as shown in the table below. Other general effects have also been considered.

The scale and significance assessment indicate that implementation of the Natural Hazards Plan Change 3 is anticipated to have medium to high social effects, low to medium economic and cultural effects, and positive environmental effects. Overall, the Natural Hazards Plan Change 3 is anticipated to have effects of medium to high scale.

Therefore, to meet the requirements of section 32(1)(c) of the RMA, it is considered that a medium to high level of detail is appropriate for this section 32 report.

Table 10: Scale and significance assessment

Effects	Scale and significance factor	Low	Medium	High	Comment/explanation
General/policy	Degree of change from the operative plan		✓		The Natural Hazards Plan Change 3 differs substantially from the natural hazard provisions in the operative plan. The operative rules only contain provisions for flooding. In addition to flooding, the Natural Hazards Plan Change 3 will manage and plan for liquefaction hazards, landslide debris inundation, debris flow fans and fault rupture through the use of Natural Hazard Overlays.
	Geographic scale of effects - district wide significance			✓	Operative plan has a very narrow focus on natural hazards, with only small, specific parts of the District mapped in a Flood Hazard Overlay. Each of the new Hazard Overlays have been assessed as a district wide scale.
	Address effects that have been considered implicitly or explicitly by higher order documents			✓	Consistent with direction of s6(h) RMA Consistent with Canterbury Regional Policy Statement policy with particular regard to policy 11.3.1
	Address an existing or new resource management issue			✓	The Natural Hazards Plan Change 3 seeks to address the existing resource management issues that the operative plan does not address.
Environmental	Involve a matter of national importance in terms of Section 6 of the RMA			✓	The Natural Hazards Plan Change 3 is consistent with section 6 of RMA with particular regard to natural hazards.
	Involve another matter under Section 7 of the RMA			✓	s7 (i) directs that particular regard shall be paid to climate change. The Natural Hazards Plan Change 3 incorporates climate change into flood modelling by using the most recent IPCC advice available.

Effects	Scale and significance factor	Low	Medium	High	Comment/explanation
Cultural	Raise any principles of the Treaty of Waitangi (Te Tiriti o Waitangi) under Section 8 of the RMA	✓			KDC seeks a partnership with Te Rūnanga o Kaikōura to strengthen relationships and ensure that principles under the Treaty of Waitangi are being met.
	Scale of effects on Mana Whenua		✓		Ngai Tahu Climate Change Strategy sets out short term and long term priorities for the management of climate change. Climate change predictions have been considered in the Natural Hazards Plan Change 3.
Social	Affect a large number of people in the district			✓	The scale of social effects on people is assessed as a medium level of significance overall because the Natural Hazards Plan Change 3 represents a moderate change to the current way natural hazards are managed. While more properties and people will be affected by the hazards that are identified, landowners that are affected by the proposed mapped hazard areas may raise concerns about the restrictions on their private property rights. However, should a natural hazard event occur then there are potential financial, health, and safety benefits for individuals, property and the community as a whole.
	Affect options for future generations to remedy effects		✓		
	Affect people's health and safety			✓	
	Affect those with particular interests including mana whenua, industry groups		✓		
	Affect development opportunities or land use options			✓	
	Effect on character and amenity of local communities	✓			
Economic	Likelihood of increased costs on individuals, communities or businesses		✓		It is expected there to be an increase in costs for some individuals, in particular for those who are in the Fault Awareness Overlay, Fault Avoidance Overlay, Landslide Debris Inundation Overlay, and Debris Flow Fan Overlays who are wishing to develop.

Effects	Scale and significance factor	Low	Medium	High	Comment/explanation
					Property owners within the Liquefaction Hazard Overlay wishing to subdivide will also be required to obtain a soil analysis via a Geotechnical Consultant. People being able to continue to get insurance because they are less likely to develop in known hazardous areas. There is also the potential for house valuations to change for some properties. Note, they may decrease in value but may also increase in value. There may also be low to little change in property valuations across the district. Increased cost - flood risk in commercial and industrial zones

6. EVALUATION OF OBJECTIVES

Section 32(1)(a) of the RMA requires an evaluation of the proposed objectives to determine the extent to which they are the most appropriate way to achieve the purpose of the RMA.

Evaluation of the proposed objectives needs to be undertaken to a medium-high level of detail to correspond with the results of the scale and significance assessment shown in Section 5 of this report.

Below is a summary of the proposed objectives that have been identified as the most appropriate to address the resource management issue(s) and achieve the purpose of the RMA and CRPS, against those objectives in the operative plan.

6.1 Evaluation of Operative and Proposed Objectives

Table 11: Evaluation of Operative Objectives against the RMA

Operative Objectives	Appropriateness to achieve the purpose of the RMA
8.2.1. To avoid or mitigate loss of life, damage to assets or infrastructure and disruption to the community as a result of natural hazard events	The operative objectives display a narrow focus on natural hazard management. Objective 8.2.1 is broad and there are no corresponding rules to achieve the objective. The only objective that utilises a rule framework is 8.3.1, in which it provides rules for flood hazards. However, the rules only address small, localised parts of the district, using outdated flood maps. Objective 8.5.1 acknowledges other natural hazards such as sedimentation, yet there is no rule framework to manage this. Collectively, the operative objectives do not adequately recognise natural hazard risks as a matter of national importance under s6(h) of the RMA or promote the avoidance of natural hazard risk in the first instance, as required by the CRPS. The operative objectives are not appropriate to achieve the purpose of the RMA 2 6(h) as it does not adequately provide for natural hazard planning
8.5.1 To avoid or mitigate adverse effects such as damage to assets or infrastructure, disruption to the community, loss of life, or sedimentation, as a result of development on unstable land.	
8.6.1 To avoid or mitigate adverse health effects on people from over-exposure to the sun.	
8.3.1. To avoid loss of life, damage to assets or infrastructure and disruption to the community as a result of flooding	

Operative Objectives	Appropriateness to achieve the purpose of the RMA
	Therefore, it is considered that the operative objectives will not result in the effective management of natural hazards in the District.

Table 12: Evaluations of the Proposed Objectives Under the RMA

Proposed Objectives	Appropriateness to achieve the purpose of the RMA
8.2.1 Risk from natural hazards New land use and development 1. Is managed in the Urban Flood Assessment Overlay to ensure that the risk to people and property are mitigated and the ability of communities to recover from natural hazards is maintained; and 2. Is avoided in High Hazard Areas outside of the Urban Flood Assessment Overlay; and 3. Is managed in all other Hazard Overlays outside of High Flood Hazard Areas	Proposed Objective 8.2.1 is directive in requiring subdivision, use and development in areas identified as being susceptible to natural hazards (non-coastal) to not significantly increase the risk to people, life and property. This recognises that in some instances existing development is already located in hazard prone areas, and provides for an acceptable increase in risk, to enable Policy 11.3.1 of the CRPS to be given effect to. They also seek that activities allowed in the natural hazard overlays do not reduce the ability of the community to recover after a natural hazard event. The objectives are considered appropriate in terms of s5 of the RMA, as they strike a balance between allowing development and use to provide for the economic, social and health and safety needs of people and communities where the level of risk is acceptable, but avoiding new development where the risk is unacceptable. In this way, the proposed objectives support a risk-based approach that also seeks to improve the resilience of communities within the District, and their ability to recover after an event.

Proposed Objectives	Appropriateness to achieve the purpose of the RMA
8.2.2 Infrastructure The upgrading, maintenance and replacement of existing infrastructure and new non-critical infrastructure within all Natural Hazard overlays is enabled where the infrastructure does not increase the risk to life or property from natural hazard events, or transfer the risk to another site; and New critical infrastructure avoids high hazard areas, but where this is not possible or is impractical, it is designed to maintain its integrity and ongoing function during and after natural hazard events or can be reinstated in a timely manner.	Objective 8.2.2 recognises the vital role that infrastructure has in the District, connecting transport networks, and providing essential services. The objective also recognises the topography of the District limits location choice for certain infrastructure and it may be necessary or unavoidable to be located in high hazard areas. The objective allows for this to occur but ensures infrastructure is designed so that it can be used during and after a significant natural hazard event. This objective seeks to keep communities connected and served on a day to day basis but also during crucial recovery periods when critical infrastructure is most needed, post a natural hazard event. Objective 8.2.2 also gives effect to the CRPS which states that critical infrastructure "New critical infrastructure will be located outside of high hazard areas unless there is no reasonable alternative. In relation to all areas, critical infrastructure must be designed to maintain, as far as practicable, its integrity and function during natural hazard events." The aims of Objective 8.2.2 is to enable the upgrading, maintenance and replacement of infrastructure within acceptable risk levels but without prohibiting the development of critical infrastructure in high hazard areas where necessary or unavoidable.

7. EVALUATION OF POLICIES, METHODS AND RULES

Section 32 (1)(b) of the RMA requires an evaluation of whether the policies and methods within the Natural Hazards Plan Change 3 are the most appropriate way to achieve the objectives by identifying other reasonably practicable options. As well as assessing the efficiency and effectiveness of the proposed policies and methods in achieving the objectives and summarising the reasons for deciding on the proposed policies and methods.

The assessment must, if practicable, quantify the benefits and costs and assess the risk of acting or not acting if there is uncertain or insufficient information available about the subject matter. In the following table, the natural hazards policies have been evaluated. Some rules relate to more than one policy

7.1 Evaluation of Proposed Approach and Other Options

This section provides an evaluation of benefits, costs, efficiency and effectiveness as well as the risk of acting or not acting for the following three options:

Proposed approach (Natural Hazards Plan Change 3)

The proposed approach is a risk based approach to management of natural hazards. The approach will use the latest technical information received via multiple reports that serve to guide natural hazard planning within the district.

The approach considers a wider range of natural hazards than the operative district plan. The operative district plan only has rules pertaining to flooding, whereas the Natural Hazards Plan Change 3 will expand on flooding rules, as well as incorporate and manage fault rupture, liquefaction hazards, landslide and debris flow fan inundation. This approach will identify areas at risk from natural hazards via Natural Hazard Overlays.

The rule framework will have tighter controls over properties within or partially within the Fault Avoidance Overlay, Fault Awareness Overlay, and the Landslide and Debris Flow Fan Overlay. The rule framework will introduce controls for properties looking to subdivide within or partially within the Liquefaction Hazard Overlay. This approach will utilise a certificate approach for properties within or partially within the Flood Assessment Overlay intended to reduce the number of resource consents

Status quo (no change)

A status quo approach would keep the operative provisions for natural hazards as they currently are. The rule framework would continue to only manage and mitigate flood hazards and focuses on avoidance in high hazard areas.

The operative natural hazard provisions focus on the identification of different natural hazards and seeks to educate the community around the natural hazards prevalent in the district yet has little provisions to manage them.

Highly restrictive approach

A highly restrictive approach would have a policy focus on avoidance of land use and subdivision within all the natural hazard overlays. It would seek to have a high use of the non-complying status and would see a sharp increase in technical reports and resource consents. A higher level of detail would be required for technical information and would result in steep increases in costs for developers, ratepayers and property owners and would significantly slow development process in the district.

Removal of regulation

An approach of having no regulation has not been considered for the Natural Hazards Plan Change 3 and assessed given the clear directions from the Resource Management Act s6(h) and Canterbury Regional Policy Statement requirements to manage natural hazards through a planning framework.

Table 13: Evaluation of options

Options to achieve the objectives relating to Natural Hazards	Benefits	Costs	Efficiency	Effectiveness	Risk of acting
Option A: Proposed approach					
	• A risk-based approach (Policy 8.3.2) will result in people, communities and infrastructure being better protected from the impacts of natural hazards as well as increased community resilience and ability to recover. • Proposed provisions provide for better community awareness • Improved community awareness and community resilience of natural hazards	• Costs can be measured in terms of both financial costs and non-financial costs. The proposed approach seeks to reduce or lessen the likelihood of increased intangible costs. The proposed approach aims to take a regulatory approach that considers a wider range of natural hazards and implement an appropriate methodology so that in a natural hazard event, the cost of intangibles is reduced. • Other financial costs relate to temporary accommodation	• Flood hazards will be more efficiently managed through the new rule framework and methods as certificate approach seeks to reduce resource consent numbers. • Uses the latest, most up to date technical knowledge • Allows local economy to recover quicker from natural hazard events • Policy 8.3.5 recognises the role of natural features and buffers to provide natural hazards protection. This gives effect to	• Gives effect to purpose of the RMA • Flood hazards will be more effectively managed. • Policies 8.3.10 and rule 8.5.2 give effect to Policy 11.3.1 of the CRPS by permitting Hazard Sensitive activities in existing properties within high hazard flood, provided the risk can be adequately mitigated. • Policy 8.3.11 and corresponding rule 8.5.3 give effect to Policy 11.3.1 of	• Properties that are at risk from natural hazards are not identified. • Still an element of uncertainty with the technical information • Removal of natural features may exacerbate the effects of some natural hazard events. • There may be some unavoidable inaccuracies in the Hazard Overlays as some properties may be incorrectly identified whilst

Options to achieve the objectives relating to Natural Hazards	Benefits	Costs	Efficiency	Effectiveness	Risk of acting
	• It is anticipated for there to be a reduced number of resource consents for properties identified in the Urban and Non-Urban Flood Assessment Overlay as certificate approach is being implemented. • The rule framework in the Natural Hazards Plan Change 3 is directive in avoidance of developing in high hazard areas is considered to be beneficial to individuals lives, property and the community. • Utilises some previously known technical information (e.g. fault lines and historical flooding information) and expands on this knowledge using latest technical information • Policies that are focused on management, mitigation and avoidance can be considered beneficial, seeking to reduce	where homes are uninhabitable, insurance pay outs, exceedance of insurance policy allowances. The proposed approach aims to have a regulatory framework that will keep financial costs to a minimum. • The proposed approach may see a reduction in development opportunities for properties identified on the planning maps as being High Hazard Areas. • May see some further reduced development opportunities where property owners have property partially within a Natural Hazard Overlay as identified on the planning map. • With associated impacts upon property values. Conversely, property values may also increase • Potential issues securing insurance in the future and or insurance premiums rising for properties within natural hazard overlays/high hazard areas.	policy 11.3.6 in the CRPS which directs territorial authorities to protect and restore natural features which assists in the avoidance or mitigation of natural hazards • Communities, businesses, infrastructure and local authorities will benefit from planning that takes into account the latest technical information and climate change projections. • This also allows for better long term planning as climate change is a long term issue • Framework allows for unobstructed development for properties that are partially within a hazard overlay. This means that if a property partially falls within an overlay, only the part of the property within the natural hazard overlay will be subject to the natural hazard rules.	the CRPS by not permitting Hazard sensitive activities in the Non-Urban Flood Assessment Overlay. • Provisions do not affect owners under existing use rights under s10 of the RMA • The rules are only imposed on the parts of properties that are in the natural hazard overlay. • Framework for earthworks is qualitative, rather than quantitative. This allows for earthworks to be undertaken, without being overly restrictive but aims to keep risk at an acceptable level.	other properties may be left out. Furthermore, there may be cost to developer to mitigate/manage a theoretical risk.

Options to achieve the objectives relating to Natural Hazards	Benefits	Costs	Efficiency	Effectiveness	Risk of acting
	disruption to people's lives and damage to property and contents. • The proposed approach aims to provide further certainty within community but also for planning • The proposed approach sets out how natural hazards will be managed in the future from a planning perspective.	• May increase individual geotechnical costs for property owners in landslide and debris Flow Fan Overlay, as well as properties in Fault Awareness Overlay or Fault Avoidance Overlay. • May increase number of resource consents for properties within or partially within the Urban and Non-Urban Flood Assessment Overlay, Landslide Debris Inundation Overlay, Debris Flow Fans Overlay, Fault Awareness Overlay and Fault Avoidance Overlay. • This approach may se an increase in compliance and monitoring costs • Cost effective to retain natural features and buffers against natural hazards • The level of operation required is greater than in the operative plan. The operative rule framework does not provide for	• The natural hazards rule framework will not affect properties with existing use right under s10 of the RMA • Many of the properties in the Urban and Non-Urban Flood Assessment Overlays are already in the operative flood hazard area and would already have to apply for a resource consent. It is not considered a significant number of new properties will be required to apply for resource consent as the certificate approach seeks to reduce the resource consent numbers.		

Options to achieve the objectives relating to Natural Hazards	Benefits	Costs	Efficiency	Effectiveness	Risk of acting
		fault rupture, landslide debris inundation, debris flow fans or liquefaction hazards. • Increased cost of developing land where increased or unexpected mitigation is required			
Option B: Status quo					
	• No increase in the number of properties identified as being affected by natural hazards. • No increase in planning or development costs • No new technical reports or external expert advice	• This approach does not account for new and updated hazard information, which means that properties that are at risk from natural hazards are not identified. • Climate change projections will not be included in rule framework. • The operative approach to flood hazards is not sufficient to adequately manage flood risk in the Kaikoura District • Development may still occur areas considered to be high hazard, resulting in legacy issues	• Keeping the status quo is an inefficient means of planning for natural hazard as recovery may be slow in the next significant natural hazard event • Inefficient as does not use latest technical information (against CRPS direction)	• Not effective in protecting people and communities from the effects of natural hazards, as does not include all known natural hazard information, and does not take a risk-based approach that considers both likelihood and consequences. • Current flood provisions are not efficient, as vary for different areas of the District.	• Will result in more people, property and infrastructure being exposed to the impacts of natural hazards • Retaining status quo may lead to a decrease in community resilience. • Does not give effect to the RMA, CRPS and other higher order planning documents and directions. • May result in worsened effects of neighbouring properties

Options to achieve the objectives relating to Natural Hazards	Benefits	Costs	Efficiency	Effectiveness	Risk of acting
		• Future problems more likely to arise at time of Civil Defence Emergency e.g. welfare and housing issues • The cost of a large flooding event without any increase in regulatory control (status quo), could lead to increased costs of intangible factors such as social disruption, days lost when businesses can't open for trading as well as both physical and mental health impacts and stress.		• Operative provisions do not give proper effect to CRPS • Does not acknowledge the latest research and technical information therefore non consistent with RMA directions • Does not incorporate climate change predictions into flood modelling.	• Risk of increased litigation if development is continued to be allowed in high hazard areas. • In regard to wildfire, if no setback zones are imposed in the rural zone, dwellings may be subject to rapid spread of wildfire, resulting in loss of property and/or human life • Infrastructure is continued to be developed in inappropriate places, resulting in an increase risk to people and infrastructure
Option C: Heavily regulated approach					
	• An increased regulatory approach would heavily restrict activities and development in hazard prone areas and thereby reduce natural hazard risk.	• A heaving regulated approach would see an Increase in resource consent requirements property owners will be under a highly increased restrictive rule framework	• Inefficient as heavily regulated approach unnecessarily restricts development in district • Inefficient for planning as more time is taken to process resource consents	• Inconsistent with CRPS for a more permissive approach in existing urban areas. • Time inefficient to process amount of resource consents	• An overly conservative and blunt approach may unnecessarily restrict development in the district. • Technical evidence will need to be more robust

Options to achieve the objectives relating to Natural Hazards	Benefits	Costs	Efficiency	Effectiveness	Risk of acting
	• Development occurs in locations considered to be low risk at an acceptable level.	• This approach would likely see Increased community frustration for existing development in hazard prone areas. • An overly regulated rule framework would see an Increase in geotechnical costs • Reduced ability to develop in district • Substantial increase in costs for planning and the Council to process resource consents • Substantial increase in development costs for ratepayers, community and individuals • Process would be considerably slower due to tighter controls that restrict development.	• Inefficient for property owners as takes more time to prepare applications/apply for resource consents and Geotech reports	• May lead to more a more resilient community after a natural hazard event. • Despite an increase in heavy regulation, an element of uncertainty in the methodology would still remain.	• Community objections • A heavily regulated approach would be unattractive to developers and buyers looking to develop in the district.
	Quantification Section 32(2)(b) requires that if practicable the benefits and costs of a proposal are quantified. Given the assessment of the scale and significance of the proposed changes above it is considered that quantifying costs and benefits would add significant time and cost to the s32 evaluation processes. The evaluation in this report identifies where there may be additional cost(s), however the exact quantification of the benefits and costs discussed was not considered necessary, beneficial or practicable.				

7.2 Summary of options and proposed approach

Out of the three options considered, it is considered that option A: the proposed approach is the best course of action. This option is considered to be the most efficient and effective option. Option A – the proposed approach gives effect to the policy approach in the Canterbury Regional Policy Statement and the directions in the Resource Management Act. The proposed option uses a risk-based approach for natural hazard planning within the Kaikōura District. A risk-based approach considers the level of tolerable and intolerable risk. The proposed approach uses the latest technical information available to mitigate and minimise natural hazard risk within the Kaikōura District. Option A is considered to be the best approach as the operative natural hazards chapter is not considered to be adequate to plan for natural hazards. The proposed approach incorporates more regulation and considers a more comprehensive view on natural hazards as opposed to the operative plan. It is considered the benefits to the community and the district will outweigh the costs and risks of acting on the proposed approach.

The proposed objectives and policies provide for a rule framework that seeks to avoid, remedy or mitigate significant adverse effects of natural hazards on people, communities, property and infrastructure by managing activities based on their sensitivity to hazards, combined with consideration of the likelihood, severity and consequences of the hazards. This means that Hazard Sensitive activities are generally to be avoided in high hazard areas, while recognising the ability of mitigation measures to reduce risk to acceptable levels in existing urban areas. This risk-based approach to managing natural hazards is in accordance with the purpose and principles of the RMA, gives effect to the CRPS, and represents best practice for protecting people, communities and property from the effects of natural hazards. Therefore, the above evaluation demonstrates that Option A, being the proposed approach, is the most effective and efficient method for managing natural hazards in the Kaikōura District. It is considered that the proposed approach (option A) is the best option for the Natural Hazards Plan Change 3.

Appendix 1 : Communications to support Natural Hazards Plan Change 3

Collateral can be viewed here (only Council staff will be able to access) or in hardcopy form in the District Plan Comms folder that is with the Planning team.

Website

Latest news posts

The latest news post has been updated on at least 3 separate occasions. The updates included adding in meeting information, fact sheets and interactive maps.

Static page

Was updated with the scientific reports and fact sheets.

Facebook

Stats as at 25 November 2019. Some posts were boosted to increase engagement.

Posts

29 November – advertising meeting on 30th
Scheduled post

25 November – advertising interactive maps and meeting on 30th
Posted 9.46am

14 November – advertising interactive maps and meeting on 30th
2,101 people reached | 147 engagements | 3 shares

8 November – advertising interactive maps and the risk workshops
1,946 people reached | 178 engagements | 4 shares

5 November – advertising the district plan review and workshops
649 people reached | 15 engagements | 1 share

29 October – advertising risk workshops
638 people reached | 2 engagements

21 October – Introducing the District Plan change
723 people reached | 19 engagements

Advert

Directing people to the website for more information
Spent $122.39 over 41 days/cost per link click $1.06 | 116 link clicks | people reached 528

Events

Community risk workshop events were loaded onto Facebook on 21 October. Due to the poor interaction with these events, no event was loaded for the workshop on 30th November.

Oaro/Goose Bay – 0 interested/0 going

Clarence and Kekerengu – 0 interested/0 going

Kaikōura Township – 3 interested/0 going

Electronic newsletter

Emailed out to 2,143 people on our email newsletter list.

October – 33% opened | 14.8% opened on resend (to those who didn't open the first email)

September – 33.8% opened | 11.5% opened on resend (to those who didn't open the first email)

Hardcopy newsletter

Distributed across the Kaikōura township including Clarence and Kēkerengū.

November – Community workshop meeting time and date, interactive maps link and latest news website page link

October – Introducing the District Plan natural hazards review, meeting times and the have your say diagram

Rates insert

November – Get involved with the process request, interactive map link, community workshop details and link to the District Plan latest news page on website

August – Introduction to the District Plan review with a link to the plans reports bylaws and policies website page

Flyers

One flyer was distributed across the Kaikōura township including Clarence and Kēkerengū. This flyer was advertising the community risk workshops and provided information on how to get involved, website links and what hazards are being reviewed.

Poster

Poster advertising the community risk workshops was placed on the Civic Building notice board.

Poster advertising the combined workshop was placed on the Civic Building notice board

Newspaper

Paid advertising

27 November – ½ page advert promoting the interactive maps and the combined community workshop

20 November – ½ page advert promoting the interactive maps and the combined community workshop

6 November – ½ page advert promoting the risk workshops

30 October – ½ page advert promoting the risk workshops

16 October – ½ page advert promoting the process and risk workshops

Articles

27 October – Article expected to be included in this paper as advised by reporter Alice French

16 October – Laser survey helping in natural hazard planning

Press releases

Media releases are available online here. They were sent out to our local groups and influencer list and all staff email list

15 November – Online maps help property owners understand risks around natural hazards in Kaikōura

8 October – Community invited to discuss new science on natural hazards in Kaikōura

Display & Fact Sheets

Library display went up on Friday 8 November 2019

Fact sheets were displayed in the reception area in July 2020 as well as planning maps which show the Liquefaction Hazard Overlay, Fault Avoidance Overlay, Fault Awareness Overlay and Flood Assessment Overlays

Property owner letters

2063 letters were sent out on the 27th July 2020 to property owners within the natural hazard overlays. The community were invited to supply feedback or voice queries, questions or concerns. This was a good opportunity to gain a better understanding of natural hazards within the district.

Appendix 2: Natural Hazards Advisory Group

Kaikōura Natural Hazards Advisory Group

Kaikōura Natural Hazards Advisory Group (NHAG) was established to provide advice to the council throughout the natural hazards plan change process. The terms of reference stated that it would 'act as a sounding board on how best to meet our community's needs' in relation to developing the plan change.

Objectives

The objectives of the NHAG were

1. to explore long term strategies and apply these under the Resource Management framework for known mapped:

- flooding hazards areas
- liquefaction hazard areas
- debris inundation areas
- fault lines

2. To explore planning solutions to meet our community's present and foreseeable future needs.

3. To give effect to National and Regional Planning requirements under the Resource Management Act, including the Canterbury Regional Policy Statement.

4. To explore and advise on methods to increase public awareness and understanding of natural hazards and to provide for community driven solutions.

5. To ensure that Kaikōura district can continue to develop and prosper while promoting our sustainable approach.

6. To provide co-operative and constructive advice and feedback to Council

Membership

The NHAG was established to include up to 16 representatives from community groups and government agencies. Members were invited to join as follows:

- Community members reflecting a range of backgrounds and interests within the community

- Members from organisations who are likely to be impacted from natural hazards
- One to two members from Te *Rūnanga* o *Kaikōura*
- Representatives from KDC and Environment Canterbury

Danny Smith, former Kaikōura Mayor and businessman, agreed to chair the group. The following individuals were approached and agreed to join the NHAG:

Mel Austin	Future Kaikōura and Westpac Kaikōura
Corrina Allan	Beach House Café
Janice Dreaver	Harcourt's Real Estate
Lynette Buurman	Encounter Foundation
Phil Bradfield	Department of Conservation
Richard Shaw	NZTA
Rebecca Beals	KiwiRail
Ted Howard	Kaikōura Water Zone Chair, Hutton's Shearwaters
Noah Bentley	Youth Council
Elisha Young-Ebert	Federated Farmers
John Murray	Local farmer
Graham Lamond	Fire and Emergency New Zealand
Martin Homisan	KDC Economic Development
Kd Scattergood	KDC Civil Defence Emergency Management

The NHAG met five times as follows:

Meeting 1 - Introduction	7 August 2019 2019 (10-12pm)
Meeting 2 - Science Workshop	11 September 2019 (12-4pm)
Meeting 3 - Risk Workshop	7 November 2019 (8-12pm)
Meeting 4 - Policy Response workshop	4 December 2019 (12-4pm)
Meeting 5 – Draft Provisions Workshop	23 September 2020 (10-12:30pm)

Appendix 3: Consultation and feedback

Date	Feedback received	Name of group/consultee	Consultation undertaken	Feedback/issues raised	Council response
23.09.20	23.09.20	Natural Hazards Advisory Group (NHAG)	Council staff and the District Plan Working Group (DPWG) met with the NHAG to present draft provisions and provide opportunity for feedback	The NHAG indicated that possible further consultation via a public workshop or meeting would be beneficial. It was noted there was a low public turnout at the previous meetings and after receiving the natural hazards letter, it would be a good time for further consultation.	No change to plan
				Insurance notes for LIMs - The NHAG commented that it would be beneficial to add a note on LIMs regarding natural hazards. This would help to ensure people are aware of the risks when buying.	It was noted that this already occurs as a note on LIMs stating their property may be affected by natural hazards.
28.09.20	9.10.20	Federated Farmers	Draft provisions were sent out post meeting with the NHAG who were invited to respond. This feedback was from an individual NHAG member who	Introduction Fed Farmers queried the source of the climate change predictions	The introduction was amended to read …" the flooding assessments required by this chapter will incorporate current climate change predictions based on IPCC advice."

			represents interests of Federated Farmers	NH-P14 Fed farmers commented for 'regular community and engagement to be added at the end of the policy	NH-P14 This policy was amended as follows Encourage the consideration of other natural hazards such as wildfire, sun exposure, and wind as part of subdivision use, and development through education and engagement
				NH-R6 earthworks rule originally read "above ground earthworks in any Flood Assessment Overlay within any continuous 2-year period Where this activity complies with the following activity standards 1. No more than 25m^3 is undertaken within a high hazard area and 2. No more than 10m^3 is undertaken within an overland flow path Fed farmers commented "please consider an exemption for necessary primary production earthworks	NH-R6 earthworks This rule was under discussion and was amended at a later date
				NH-S1, flood assessments were valid for two years from the date of issue.	It was agreed two

				Federated Farmers commented that two years may not be long enough.	years was too short of a time frame and was extended to five years.
28.09.20	12.10.20	Kiwi Rail	Individual was part of the NHAG. Draft rules were sent out for comment	NH-P9 – references Ngati Kuri – is that correct? NH-R7 – should that also include operation, maintenance, replacement and repair, in line with NH-P11? Currently it permits upgrading which links to NH-P13, but there's no operation, maintenance etc provided for.	Changes has been made to policies and rules since
14.10.20	14.10.20	KDC Councillors	First workshop was held with KDC Councillors and were invited to provide feedback on draft provisions.	Agreement that mitigation steps need to be taken but are some of the rules too restrictive	District Plan Working Group to come back with what other Councils are doing as well as a table of old KDC rules compared to new KDC rules
				Comments that draft chapter needs more work	District Plan Working Group to amend chapter and come back with a date for a future workshop.
11.11.20	11.11.20	KDC Councillors	Second workshop was held with KDC Councillors and were	Earthworks - commented that 25m3 was too restrictive	Earthworks rule amended as follows Where the a Above

			invited to give feedback.		ground earthworks in any Flood Assessment Overlay that does not comply with the following conditions: activity: a. will not worsen flooding on another property through the diversion or displacement of floodwaters; or b. meets the definition of land dist

					urb anc e
				Questions were raised around the need for urban vs non-urban zoning, what is the difference and why is it needed.	No change to draft provisions to date Note: this was also questioned by HDC
3.12 .20	-	Minister for the Environment	Minister for the Environment was formally consulted during the preparation of the Natural Hazards Plan Change 3	Automated email sent on 8/01/21 stating will be in touch if any queries	-
3.12 .20	-	Te *Rūnanga* o *Kaikōura*	Te *Rūnanga* o *Kaikōura* was formally consulted during the preparation of the Natural Hazards Plan Change 3	Automated email received 8/01/21	-
3/12 /20	-	Minister for Economic and Regional Developmen t	Minister for Economic and Regional Developmen t was formally consulted during preparation	No feedback received as of 13/01/21	-

			of the Natural Hazards Plan Change 3		
3/12/20	-	Minister of Economic and Regional Development	Minister of Economic and Regional Development was formally consulted during preparation of the Natural Hazards Plan Change 3	Automated email received 8/01/21	-
3/12/20	-	Minister for Biosecurity	Minister for Biosecurity was formally consulted during preparation of the Natural Hazards Plan Change 3	No feedback received as of 13/01/21	-
3/12/20	-	Minister of Conservation	Minister of Conservation was formally consulted during preparation of the Natural Hazards Plan Change 3	No feedback received as of 13/01/21 Automated email received 8/01/21	-
3/12/20	-	Minister of Transport	Minister of Transport was formally consulted	Automated email received 8/01/21	-

			during preparation of the Natural Hazards Plan Change 3		
3/12/20	-	Minister of Agriculture	Minister of Agriculture was formally consulted during the preparation of the Natural Hazards Plan Change 3	Automated email received 8/01/21	-
3/01/20	-	Minister of Foreign Affairs	Minister of Foreign Affairs was formally consulted during preparation of the Natural Hazards Plan Change 3	Automated email received 8/01/21	-
3.12.20	-	Environment Canterbury	Environment Canterbury were formally consulted during preparation of the Natural Hazards Plan Change 3	Automated email received 8/01/21	-
3.12.20	-	Marlborough District Council	Marlborough District Council were formally consulted	Automated email received 8/01/21	-

			during preparation of the Natural Hazards Plan Change 3		
3.12.20	18.01.21	Hurunui District Council	Hurunui District Council was formally consulted during preparation of the Natural Hazards Plan Change 3	Fault awareness zones have been developed as the data is not of a scale to identify the fault line. Therefore, it might be an option to show that the fault isn't located through the building platform i.e investigate or mitigate	Amended as suggested
				Language in NH-P12 is unclear	
				Language, grammar and formatting	Plan change to be amended to correct grammatical and formatting errors
				Definitions - the national planning standards define natural hazards but KDC has a different definition. Is there a reason why KDC is not using this?	Definition has been changed to RMA definition for consistency.
				High hazard areas - unable to find anywhere in plan that defines this. Implies KDC is relying on RPS definition but suggests KDC defines this somewhere in plan. Also, policies refer to ''high flood hazard areas" and "high flood hazard urban areas" is this a thing?	Has been defined in plan for consistency
				Flood assessment overlay – in the maps KDC has only has one overlay term "flood assessment overlay" but in the rules there is an "urban flood assessment overlay" and a "non-	

				urban flood assessment overlay". There also is no urban zone in plan so which zones do the rules apply to? There also doesn't seem to be any real benefit between having a separate urban and non-urban overlay. Is there a reason why the rules need to be different?	
				Critical infrastructure – it appears that both "infrastructure" and "non-critical infrastructure" mean the same thing in the plan. It gets confusing in NH-R7 where KDC refers to "new infrastructure" but perhaps intends to exclude critical infrastructure. Also, it appears that infrastructure is critical there might be a need to locate it in a particular location and the policy should enable this (with conditions)	
7.12.20	8.12.20	KDC Staff	KDC staff were emailed track changed copy of plan change as well as the draft rules and were invited to comment	Queried how 'intended design and nature" of a building will be defined, from a planning perspective	
				Queried that the subdivision policy ''manage subdivision within all-natural hazards overlays to ensure that the risk to life and property is low" may be too vague. How is "low" defined	
				NH-R9 should include a provision that properties should be "legally established' for it to be a permitted activity	
				Query around SUB-R2 and why it's a controlled activity as opposed to restricted discretionary	

<table>
<tr><td></td><td></td><td></td><td></td><td>Comments on formatting, grammar etc</td><td></td></tr>
<tr><td>3.12.20</td><td>27.01.21</td><td>Kiwi Rail</td><td>Kiwi Rail were formally consulted during the clause 3 consultation phase</td><td>Kiwirail are in support of the provisions, in particular
- definition of ‘critical infrastructure’
- definition of operational need’
- NH-02 – infrastructure
- NH-P2 – risk based approach
- NH-P11 – operation, maintenance, replacement, and repair of all infrastructure,
- NH-P13 – upgrading and new critical infrastructure
- NH-R8 – new critical infrastructure

The following change is however suggested to NH-R7 to address consistency issues with the specific wording proposed. NH-)2 provides that the upgrading, maintenance, and replacement of existing infrastructure and new noncritical infrastructure within all Natural Hazard Overlays is enabled. This is also enabled through NH-P11, which includes operation, maintenance, replacement, repair and removal. We would support that Rule NH-R7 be expanded to enable the additional activities that the objective and policy framework seeks to enable

<table><tr><td>NH-R7</td><td colspan="2">New,~~ or~~ upgrading, <u>operation, maintenance, replacement, repair or removal</u> of infrastructure and critical infrastructure</td></tr><tr><td>All zones;</td><td>New infrastruct</td><td>Activity status</td></tr></table></td><td></td></tr>
</table>

				Within the Urban flood assessment overlay; or Non-urban flood assessment overlay	ure, or upgrading, operation maintenance, repair or removal of infrastructure and critical infrastructure Activity status: PER Where this activity complies with the following activity standards; 1. The activity shall not result in permanent raising of	where compliance is not achieved: RDIS Matters of discretion are restricted to: 1. The likely extent of flooding on the site; 2. The nature, design and intended use of the infrastructure and its susceptibility to damage; 3. The pot		

						the ground level 4. The extent of any positive effects from proposal	
.3.12.20	29.01.21	Environment Canterbury	Environment Canterbury was formally	There are inconsistent references to risk levels – low, high, acceptable and significant risk. None are defined. It is			Agreed. Reviewed and amended.

			consulted during the consultation phase of this plan change	unclear as to what level of risk is meant, or how it is determined. Suggest - Insert definition of high flood hazard area - Insert explanation of risk based approach and acceptable/unacceptable levels of risk in the Introduction to chapter 8 - Amend provisions to refer to acceptable/unacceptable levels of risk	
				Use of the term "urban areas" e.g. 8.3.12 is confusing Suggest - Use consistent terminology – urban flood assessment overlay	Agreed. Amended as suggested
				The plan is silent on areas within the district that are subject to natural hazards but have not been assessed or included in an overlay Suggest - Include explanatory text as how to these situations will be managed, for example if it is via the Building Act	Agreed. Amended as suggested
				These may be out of scope of the natural hazards plan change which excludes coastal hazards and is not related to the RCEP Suggest - Delete any amendments involving coastal hazards, or referring to RCEP, these may be out of scope. It may be more appropriate to make	Provisions for coastal hazards have been greyed out and shaded

				these amendments under 20A of Schedule One	
				The proposed plan change does not explicitly address camping grounds in high flood hazard areas. While they may be captured in the 8.5.1 and 8.5.2 due to buildings associated with servicing camping grounds Suggest - KDC may wish to consider whether it needs to explicitly address camping grounds	New rule has been created for camping. Permitted if in flooding overlay and ground level meets legal advice in a Flood Assessment Certificate
				2.3 The draft plan change removes a prohibited activity that relates to the number of residential and low density allotments in the Ocean Ridge Comprehensive Zone Suggest - Amend to retain the text that refers to the plan having a prohibited activity for Ocean Ridge Comprehensive Zone, as this prohibited activity is not being removed.	Agreed. Amended as suggested.
				3.2.2 Site plan requirements include an incomplete list of natural hazards that will be included in the plan Suggest - Amend (b) to include additional natural hazards to be consistent with the plan change	Amended as suggested
				Chapter 4: definitions – AEP Environment canterbury prefers the use of Annual Recurrence Interval (ARI) over AEP. It is much easier for plan users to understand and as such	Changed from AEP to ARI

				may be the terminology used in future RPSs. Suggest - Consider using ARI instead of AEP	
				Definition: flood risk certificate Provisions of Chapter 8 refer to Flood Assessment Certificate – this definition of Chapter 4 is not consistent. Providing a definition of Flood Assessment Certificate may not be necessary, as an adequate description of this is included in the Natural Hazards Standard 8.6.2 Suggest - Delete definition of flood risk certificate. If a definition is retained, then refer to Flood Assessment Certificate for consistency with Chapter 8	Agree. Definition has been deleted.
				The provisions refer to flood assessment overlays, as including Urban Flood Assessment Overlay and the Non-urban Flood Hazard Assessment Overlay, however there is no definition for these two overlays collectively Suggest - Insert new definition of Flood Hazard Assessment Overlays	Amended as suggested
				Definition: Hazard Mitigation Works The definition should be more specific to natural hazard events. Environment Canterbury prefers this definition to be broad and non-specific regarding what is considered to be natural hazards mitigation works and who benefits	Agree. Amended as suggested.

				Suggest - Amend to read Natural Hazard Mitigation works, and natural hazard events - Consider amending the definition to finish after the word ***events***	
				Definition: Hazard overlay The definition title should be more specific to natural hazards. It should also include Debris Flow Fan Overlay Suggest - Amend to read natural Hazard Overlays, include the Debris Flow Fan Overlay and refer to the planning maps	Agree. Amended as suggested.
				Definition: Hazard Sensitive Building The current definition specifically excludes accessory buildings, which under the KDP definition includes sleepouts. Therefore, sleepouts are not considered hazard sensitive buildings. The KDP definition of habitable building includes any building which provides overnight accommodation for people. The definition also limits hazard sensitive buildings to those used as part of the primary activities on the site. This may be problematic as there is no definition/explanation of what primary activities are, or how many primary activities can exist on a site. Amend definition to include habitable rooms to ensure that sleepouts are included. Clarify what primary activities are, for example consider inserting a definition	Amended in draft provisions.
				Definition: High flood hazard area Provisions make a distinction between high flood hazard areas and	Amended to be consistent

				other areas that may be subject to flooding, however there is no definition of high hazard flood area Suggest - Insert new definition of High Flood Hazard Area, consistent with RPS definition of High Hazard	with RPS definition
				Definition: Natural Hazard Natural hazard definition is inconsistent with RMA and National Planning Standards definitions. Suggest - Amend definition of Natural Hazard for Consistency with RMA and NPS	Agree. Amended to RMA definition of natural hazard.
				Definition: non-urban flood hazard assessment overlay Non-urban Flood Hazard Assessment Overlay definition should be specific to flood hazard as it does not apply to all natural hazard provisions Suggest - Amend Non-Urban Flood Assessment Overlay definition of overland flow path.	
				Definition: Overland Flow Path Definition of Overland Flow path is unclear and open to interpretation as to what is meant and how to measure it Suggest - Consider removing definition of overland flow path	Has been taken out of draft provisions as per recommend ation.
				Definition: woodlot	Agree. Definition of

				The definition of woodlot and 8.6.3 wildfire setback rule rely on a definition of Plantation Forestry Suggest - Insert new definition of Plantation Forestry, consistent with NPS-Plantation Forestry	plantation forestry added into definitions.
				Definition: Urban Flood Assessment Overlay Urban flood assessment Overlay definition should include the word ***hazard***, for consistency with definition of Non-Urban Flood Assessment Overlay. It should be specific to flood hazard as it does not apply to all natural hazard provisions. Suggest - Amend Urban Flood Hazard Assessment Overlay definition for better consistency with Non-Urban Flood Assessment Overlay and RPS policy 11.3.1	Do not agree. No change made.
				Chapter 7: Development and Tourism 7.2.2 policies Policy 7.2.2(1) use the word "known" which creates uncertainty around what are "known" natural hazards eg what level of certainty is required for a natural hazard to be known? In some areas further detailed assessments will be required. Suggest - Remove ***known*** from policy 7.2.2(1)	Agree. Delete "known"
				Chapter 8: Natural hazards 8.1 Introduction The introduction would benefit from	

				- Improved consistency with natural hazards that are addressed by the plan under the plan change - An explanation of 'acceptable risk' and how it is determined - An explanation of the natural hazard overlays - Prioritisation to be established by the objectives and policies - Improved clarity on natural hazard mitigation measures, including differentiation between community mitigation works and private works Suggest - Some amendments are suggested in track changed version	
				Objectives There is no overarching objective for management of natural hazards Objective 8.2.1's title – *Risk from natural hazards* is non-specific to any particular natural hazard and therefore applies to all, while the wording of the objective is limited to flood hazard and the differentiation between the urban and non-urban flood overlay Objective 8.2.1 requires high flood hazard risk to be mitigated in the urban flood overlay, but does not provide the option of avoidance Objective 8.2.1 does not address management of flood hazard in non-flood hazard areas There are no objectives relating to natural hazard mitigation works	Agree. Reference to other natural hazards has been added.

				Suggest - Insert new wording for Objective 8.2.1 to reflect a broad objective for all natural hazards, with management to acceptable levels of risk - Objective 8.2.2 becomes the objective focused on flooding. A new clause 3 is inserted into Objective 8.2.2 to address flood hazard in non-high flood hazard areas - Renumber objective 8.2.2 infrastructure to become 8.2.3 - Insert a new objective 8.2.4 relating to natural hazard mitigation works o Managing the effects of natural hazard mitigation works o Enabling community-owned natural hazard mitigation works o Maintaining and enhancing	

				natural features which provide mitigation	
				Policy 8.3.2 risk-based approach The policy could go further to establish the requirement to manage natural hazards risk to acceptable levels Suggest - Consider inserting a second clause to the policy requiring natural hazards to be managed to acceptable levels.	Amended as per ECan track changes.
				8.5.1 Clause (a) acts like a prohibited activity rule and could be removed. The flooding provisions already address high hazard areas adequately. Also, the terminology used is inconsistent with other. Eg habitable buildings. Camping grounds could be addressed in the rules. Suggest - remove clause (a)	Agree. Changes made.
				8.3.14(2) Policy wording for sensitive buildings in fault avoidance overlay ambiguous because of "high risk". There's no indication of how this is determined (see first comment)	Introduction has been amended so it explains how it is determined i.e through consent process.
				8.5.1 New buildings in urban flood assessment overlay and 8.5.6 earthworks	Changes made as per suggestions

				Use of 'building' vs activity. The activity is the building, so we suggest referring to that. The PA standard b. *not located within an overland flow path,* is intended to ensure that a hazard sensitive building will not potentially divert floodwaters onto other sites. 8.5.6 Earthworks is intended to ensure that earthworks will not potentially divert floodwater onto other sites Because 8.5.1 only addresses hazard sensitive buildings, there is a gap regarding the other buildings and structures which have the potential to divert floodwaters, for example a haybarn, a farm shed or a fence Suggest - deleting ***activity*** - delete 8.5.1 standard b - delete 8.5.1 matter of discretion 4 - amend 8.5.6 to include **earthworks, buildings and structures** - insert new definition of structure consistent with the NPS definition - delete definition of overland flow path – it is no longer necessary	
				8.5.1 and 8.5.2 new buildings in urban flood assessment overlay Could also incorporate 8.5.9 (change of use of a buildings) as same wording for rule	No change made
				8.5.2 new buildings in non-urban flood assessment overlay Use of 'building' vs 'activity'. The activity is the building	Changes made as per recommendations

				Activity status where compliance with rule 8.5.2.b or 8.5.2.c is not achieved= RD Matters of discretion – (2) 8.6.1 is drafted as a standard, it is not a hazards sensitivity classification system Matters of discretion – (3) and (5) should read 'any failure to meet minimum…' as a building may be RD due to being in an overland flow path (c) Suggest - deleting ***activity*** - delete 8.5.2 standard b - amend matter of discretion 2 to remove the reference to end after the word 'damage'. This is also consistent with Matter of discretion 2 under rule 8.5.3 and 8.5.4 - delete 8.5.2 matter of discretion 4 - amend 8.5.6 to include ***earthworks and new structures*** - Insert new definition of ***structure*** consistent with NPS definition - Delete definition of *overland flow path* – it is no longer necessary	
				8.5.3 new buildings in debris flow fan, landslide debris inundation overlays Could also incorporate 8.5.10 (change in use of a buildings) as same wording for rule	No change made
				8.5.4 New hazard sensitive buildings in fault avoidance overlay	

				Could also incorporate 8.5.10 (change in use of a buildings) as same wording for rule)	
				8.5.5 extensions to existing buildings RD activity status applies to non-compliance with rule 8.5.5 standards a and b. however there is no activity status for either a or b are not complied with Suggest - amending the RD activity status to apply to non-compliance with rule 8.5.5 either a or b	
				8.5.6 earthworks Suggest - amend to include ***earthworks and new structures,*** including the matter of discretion (2) - Insert new definition of ***structures*** into chapter 4	Agree. Amended as per changes
				8.6.1 hazard sensitive building standard Hazard sensitive building standard is already located appropriately in chapter 4 definitions. It is not necessary to include also as a standard Suggest - Remove 8.6.1 Hazard sensitive building standard.	
				8.6.3 wildfire setback standard This provision is confusing. It is unclear how it fits into the provisions as there are no references to it in other rules.	Agree. Removed from standards and written as a rule.

				There is no definition of plantation forestry, either in the operative plan or the draft plan change Suggest - Re-draft the standard into a rule - Suggest the setback be from a hazard sensitive building, rather than a residential unit, for greater consistency with the other natural hazard provisions - Insert new definition of plantation forestry	
				13.2 issue 1 and objective 1 – natural hazards Issue 1 and objective 1 do not reflect the approach to managing natural hazard risk that is taken in chapter 8 For example: issue 1 and Objective 1 – natural hazards are inconsistent with those that are addressed by the plan change Suggest - Re-draft the subdivision issue 1 and objective 1 to include all natural hazards addressed by the plan change, and for better consistency with the plan change	
				13.2.2 policies Policy 1 is a high flood hazard policy, however the wording could be more consistent with chapter 8 Policy 2 is unclear as to whether it relates to terrestrial natural hazards or is limited to coastal hazards Policies 4-6 relate to coastal hazards Suggest	No change made.

				- Insert new natural hazards policies that are consistent with the approach taken in Chapter 8, and retaining parts of the policies that relate to coastal hazards - For example: retain draft clause 7 as a policy for all natural hazards and re-order to be policy 1 - A high flood hazard policy – amend current policy 1 and re-number to be policy 2 - Retain (and renumber) coastal hazards policies	
				13.11.1 controlled subdivision activities The controlled activity status would apply to subdivisions of land that create allotments for new hazard sensitive buildings on land that is not affected by a natural hazard overlay (except for liquefaction). The wording could be better aligned with Chapter 8	No change made.
				13.11.3 restricted discretionary activities It is easier for plan users to navigate the provisions if RD activity rule is located between Controlled and Discretionary activity rules The matters of discretion are narrow, and do not address - levels of acceptable or unacceptable risk, as in some cases there may be unacceptable level of risk - effects of natural hazards on access to and from, and on servicing of sites (eg wastewater) - potential effects of mitigation measures	Agree. Changes made.

				Suggest - relocated the RD activity rule between Controlled and Discretionary activity rules - insert new matters of discretion relating to: o levels of unacceptable risk o effects of natural hazards on access to and from, and on servicing of sites (eg wastewater) o potential effects of mitigation measures	
				13.11.3 Non-complying subdivision activities Currently subdivision to create new allotments for hazard sensitive buildings within high Flood hazard areas, and in the fault avoidance overlay, is a RD activity The activity status is also inconsistent with Chapter 8, which contains an avoid policy and NC activity status for new hazard sensitive buildings in the (non-urban) high flood hazard areas. A higher bar should be set for subdivision in these two overlays where the hazard risk is higher than in the other hazard overlays Suggest - consider inserting a new non-complying activity relating to subdivision to create new	Changes made. Split out from 13.11.2 fault avoidance, debris flow fan overlay and high flood hazard flooding area (as identified through a flood assessment certificate and has been made NC as 13.11.4

				allotments with platforms for hazard sensitive buildings within high flood hazard areas (as established by a flood assessment certificate), and in the fault avoidance overlay	
3.12.20	29.01.21	Federated Farmers	Federated Farmers were formally consulted during the clause 3 consultation of the plan change	Introduction FFNZ understand and accepts the approach	
				Chapter 3 clause s Suggestion - add ''natural' here so it reads natural hazards. Plan reader can then check the definition and know exactly what it covers	Amended
				Chapter 4 Definitions Critical infrastructure Add ''adverse'' so it reads 'serious adverse effect'	
				Chapter 4 definitions hazard mitigation works Add adverse so it reads 'the adverse effects'	
				Hazard sensitive buildings We find the first sentence of this definition does not align well with other related definitions to the plan. We suggest the planning team reviews the current definitions of 'accessory building' and 'primary building' in the plan We recommend the first sentence should say, instead 'any Principal building on site within any of the natural hazard overlays. This would sufficiently cover the sorts of buildings you aim to control in highly critical areas within the district like residential homes, schools and hospitals.	Hazard sensitive building definition has been reviewed and amended

				Land disturbance We understand the need for this definition, particularly in relation to rule 8.5.6 However, the first part of the sentence – *means the alteration of land, or (or any other matte constituting the land …)* -conflates with the definition of earthworks Given how this definition applies to rule 8.5.6 which relates only to earthworks in the flood overlays, we recommend instead the sentence reads: 'earthworks that does not permanently alter the profile, contour or height of the land'	
				Natural hazard land deformation – please clarify what this relates to; is this a consequence of earthquakes or volcanic eruption? Looking at the terms included in the current definition, this may not be needed.	
				Chapter 7 development and tourism Is there a benchmark or risk matrix the council will use to gauge what is acceptable? Some more context on the risk levels would be useful.	
				Chapter 8 8.3.5 we understand and generally support the intent of this policy, which appears to be to ensure natural features that effectively mitigate the adverse effects of natural hazards are appropriately restored, maintained and/or enhanced However, we do not believe this intent is correctly expressed in this draft policy. The term 'protect' is highly restrictive and this could inadvertently prove too onerous for rural properties.	

				Rural properties, outside of the public estate, will be where most of these features will exist. Land use within or around the specific features listed, such as coastal dunes, wetlands and water body margins, is already heavily regulated for water quality and biodiversity purposes. Accordingly, this policy could create unjustified and costly duplication with Regional Council requirements. We suggest this policy is either deleted, or worded better to reflect Council's intent: '*restore, maintain or enhance natural features, such as natural ponding areas, coastal dunes, wetland, water body margins, and riparian vegetation, within all natural hazard overlays, where they will mitigate the adverse effects of natural hazards"* We recommend the reference the reference to avoiding inappropriate subdivision, use and development is unnecessary here for two reasons, and it should be deleted. 1. It detracts from the purpose of the policy, which is to promote the use of natural features to combat natural hazards, and 2. There are sufficient controls/policies/rules elsewhere in this chapter that addresses inappropriate subdivision and building in high hazard areas	
				8.3.8 upgrading new and critical infrastructure New infrastructure by their nature can't be upgraded. We suggest the	

				heading mirrors the policy 8.3.7: *new and upgrading critical infrastructure*	
				We note there was a fourth clause for this policy in the last draft which stated: Manage new critical infrastructure in all hazard overlays which are outside of high hazard areas to ensure that there is a low risk to life and property damage. The clause seems to be missing in this draft. Was there a reason this was removed?	Amended to reinclude clause 4
				8.3.11 flooding outside of high hazard areas (3) To align with 8.3.10 and 8.3.12 we suggest this sentence be changed to "not significantly increased" However, we note this policy relates to flooding areas outside high hazard areas to the threshold could be: "the risk to surrounding properties is low", which would align to the other clauses in this policy	
				Rule 8.5.6 we think this rule should read "does comply with the following conditions…" We cross refer to our comments on the definition of ''land definition''. If the definition is reviewed and suitably amended, this rule would work.	Agree. Amended as per suggestion.
				8.6.2 standards Three years is a suitable time limit, for the Council and for certificate holders	
				Chapter 13 Delete hyphen	Done.

Appendix 4: Definitions List

Definition		
Average Recurrence Interval (ARI)	The average time period between natural hazard events of a certain size. For example, a 500-year ARI flood will occur once every 500 years on average; The size of natural hazard events can also be described using Annual Exceedance Probability (AEP). A 500 year ARI flood has a 0.2% chance of occurring in any given year, and therefore it is also referred as having a 0.2% AEP A 100 year ARI flood has a 1% chance of occurring in any given year, and therefore it is also referred to as having a 1% AEP	New definition provided by ECAN
Critical Infrastructure	Infrastructure necessary to provide services which, if interrupted, would have a serious effect on the communities within the Region or a wider population, and which would require immediate reinstatement. This includes any structures that support, protect or form part of critical infrastructure. Critical infrastructure includes: 1. regionally significant airports 2. regionally significant ports 3. gas storage and distribution facilities 4. electricity substations, networks and distribution installation, including the electricity distribution network 5. supply and treatment of water for public supply 6. storm water and sewage disposal systems 7. telecommunications installations and networks 8. strategic road and rail networks (as defined in the Regional Land Transport Strategy). 9. Petroleum storage and supply facilities 10. Public healthcare institutions including hospitals and medical centres 11. Fire stations, police stations, ambulance stations, emergency coordination facilities.	New definition
Earthworks	Means the alteration or disturbance of land including by moving, removing, placing, blading, cutting, contouring, filling or excavation of earth (or any matter constituting the land including soil, clay, sand, and rock); but excludes gardening, cultivation, and disturbance of land for the installation of fenceposts	Definition amended to be consistent with NPS
Hazard Mitigation Works	Means works intended to control the effects of natural hazards	New definition
Hazard Sensitive Building	Any building which: 1. is/are used part of the primary activities on the site; or 2. contains habitable rooms; or	New definition

	3. which are serviced with a sewage system and connected to a potable water supply. For the purposes of clause 1, buildings such as the following are not included i. Farm sheds used solely for storage ii. Carports iii. Garden sheds iv. Any buildings with a dirt/gravel or similarly unconstructed floor	
High Flood Hazard Area	High Flood Hazard Areas are subject to inundation events where the water depth (metres) x velocity (metres per second) is greater than or equal to 1 or where depths are greater than 1 metre, in a 0/2% annual exceedance probability flood event When determining high hazard areas, projections on the effects of climate change will be taken into account.	
Land Disturbance	Means the alteration of land, (or any matter constituting the land, including soil, clay, sand and rock) that does not permanently alter the profile contour or height of the land	New definition
Liquefaction Hazard	Means land potentially at risk from liquefaction and lateral spread during an earthquake	New definition
Natural hazard	Any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire, or flooding) the action of which affects or may adversely affect human life, property or other aspects of the environment.	Amended definition to include new natural hazards provisions
Operational Need	Means the need for a proposal or activity to traverse, locate or operate in a particular environment because of technical, logistical, operational characteristics or constraints	New definition
Plantation Forestry	Plantation forest or plantation forestry means a forest deliberately established for commercial purposes, being- - at least 1 ha of continuous forest cover of forest species that has been planted or will be harvested or replanted; and - includes all associated forestry infrastructure but - does not include – i. a shelterbelt of forest species, where the tree crown cover has, or is likely to have, an average width of less than 30m: or ii. forest species in urban areas; or iii. nurseries and seed orchids; or iv. trees grown for fruits and nuts; or v. long-term ecological restoration planting of forest species; or	Definition from National Environmental Standards

	vi. willows and poplars space planted for soil conservation purposes	
Structure	Means any building, equipment, device or other facility, made by people and which is fixed to land; and includes any raft	
Shelterbelt	Any trees planted primarily to provide shelter for stock, crops or buildings from wind and which are no greater than 20m wide.	New definition
Woodlot	A stand of trees for the purposes of firewood, the creation of other wood products, a carbon sink, erosion control, pest or wilding tree management purposes, but excluding plantation forestry.	New definition

Appendix 5: Track Changed Document of the Natural hazards Plan Change 3

Introduction to the Natural Hazards Plan Change 3

The current natural hazards chapter is outdated. The flood maps only apply to specific areas of the Kaikōura District where detailed flood modelling has been undertaken, whereas the Natural Hazards Plan Change 3 anticipates a broader, district wide approach as flooding also occurs elsewhere in the district. Since the 2016 Kaikōura earthquake event, new assessments fault rupture, liquefaction, debris inundation and debris flow fan

information have been undertaken. The Natural Hazards Plan Change 3 anticipates a district wide approach for all of the natural hazards included.

The provisions rely on a separate set of hazard-specific planning maps, titled Proposed District Plan Map Series.

Coastal hazards are not covered as part of this Plan Change. The existing Operative Plan coastal hazards provisions have therefore been carried over into a restructured new Chapter 8 as set out. As coastal hazards are not within the scope of this plan change the Council is not anticipating any submissions on the coastal hazards provisions.

As it focusses on natural hazards, theNatural Hazards Plan Change 3 does not propose changes to other matters where change may be required as part of a broader district plan review, such as for contaminated sites where the RMA has changed the responsibilities of territorial authorities.

This natural hazard plan change involves targeted changes to the Operative Plan – they do not entirely follow the format required under the National Planning Standards (NPS) which would require more significant structural change. The Council anticipates updating the plan in the future to the NPS format.

The plan change primarily affects Chapter 8 of the Kaikōura District plan, but also includes amendments to other chapters. Text that is proposed to be deleted is written in **~~bold with a strikethrough~~**. Text that is being added is in **bold and underlined**. Text that has no proposed changes is replaced with (…)

The following chapters to be amended as follows

- Chapter 1: Introduction
- Chapter 2: Policy and legal framework
- Chapter 3: Users guide
- Chapter 4: Definitions
- Chapter 7: Development and Tourism
- Chapter 13: Subdivisions

The following chapters to be deleted entirely and replaced as follows:

- Chapter 8: natural hazards

Instruction: Amend all district plan maps to remove the following legends: Kowhai River Flood Hazard Areas; etc, etc, etc. And add a new set of planning maps titled Proposed District Plan Map Series, for natural hazards as additional planning maps which can be found at the following URL address.

Chapter 1: Introduction

Amend Section 1.3.1 as follows:

1.3.1 The Kaikōura District

(…)

The major river systems in the District are the Clarence River, the Kowhai and Hapuku Rivers, with smaller systems including the Mt Fyffe Streams, Kahutara River and the Oaro River. Some of these river systems have been subject to flooding in extreme climatic events. Other natural hazards from which the Kaikōura District is at risk include earthquakes, **fault rupture, liquefaction, landslide debris** inundation, **debris flow fans,** tsunamis, **wild fire,** high winds and other extreme climatic events.

(…)

Amend section 1.3.2 as follows:

1.3.2 The Management Role of the Kaikōura District Council under the Resource Management Act

The Kaikōura District Council's role in managing the District's natural and physical resources is prescribed by section 31 of the Resource Management Act. This section states functions to which every territorial authority shall adhere in giving effect to this Act. These include:

(…)

- The control of any actual or potential effects of the use, development, or protection of land, including for the purpose of the avoidance or mitigation of **natural hazards** ~~**any adverse effects of the storage, use disposal, or transportation of hazardous substances**~~. The control of subdivision of land.

(…)

Amend section 1.7 as follows:

(…)

The Council has developed zones which recognise that different areas of the District have different resources, characteristics, levels of amenity, and different environmental outcomes which the community desires for these areas. The zones provide opportunities for future development in keeping with the character and amenity sought for each area. **The Council has also identified natural hazards overlays.** Any particular activity must comply with the rules applicable to the zone **and overlay** in which it is situated, as well as the general rules covering a range of matters such as subdivision, heritage values and transportation.

(…)

Chapter 2: Policy and Legal Framework

Amend 2.3 status of activities as follows:

2.3 Status of Activities

(...)

Prohibited activities are activities which may not be undertaken under any circumstances. Resource consent will not be granted, and no resource consent may even be applied for**.** The only prohibited activities in this Plan relate to ~~**activities in the Flood Hazard Areas 1 and 1a and**~~ the number of residential and low density residential allotments allowed in the Ocean Ridge Comprehensive Zone. ~~**Refer to section 8 (Natural Hazards), Rule 13.11.4 (Subdivision) and to the Planning Maps (Part 4).**~~

Chapter 3: User's guide

Amend Section 3.2.1 Drawings to add new clause S

Drawings

(…)

r. a floor plan of each building (at a scale of not less than 1:100) showing:

— use of all parts of the building, including basements, parking, lift towers, storage or service areas;

— room layout of the building, if this is known, and a clear identification of the use of different rooms or parts of a floor.

s. – the location of any known natural hazards in relation to the land.

(…)

Amend section 3.2.2 Subdivision Consent Applications - Information to be Included - Plans section as follows:

(…)

The site plan should also show where relevant:

a. topographical information (including New Zealand map grid references), wherever possible in terms of the Kaikōura Datum, together with a certificate as to its origin and accuracy;

b. details of hazardous areas (for example, uncompacted filling**, areas potentially subject to liquefaction, landslide debris inundation, debris flow fans, fault rupture,** or flood**ing** ~~**prone areas**~~);

(...)

Chapter 4: Definitions

Insert new definition for Average Recurrence Interval (ARI)

Average Recurrence Interval (ARI)

means the average time period between natural hazard events of a certain size.

Note:

- **For example, a 500 year ARI flood will occur once every 500 years on average.**
- **The size of natural hazard events can also be described using Annual Exceedance Probability (AEP).**
- **A 500 year ARI flood has a 0.2% chance of occurring in any given year, and therefore it is also referred as having a 0.2% AEP.**
- **A 100 year ARI flood has a 1% chance of occurring in any given year, and therefore it is also referred as having a 1% AEP.**

Insert new definition for critical infrastructure as follows:

Critical Infrastructure

means infrastructure necessary to provide services which, if interrupted, would have a serious effect on the communities within the Region or a wider population, and which would require immediate reinstatement. This includes any structures that support, protect or form part of critical infrastructure. Critical infrastructure includes:

12. **regionally significant airports**
13. **regionally significant ports**
14. **gas storage and distribution facilities**
15. **electricity substations, networks and distribution installation, including the electricity distribution network**
16. **supply and treatment of water for public supply**
17. **storm water and sewage disposal systems**
18. **telecommunications installations and networks**
19. **strategic road and rail networks (as defined in the Regional Land Transport Strategy).**
20. **Petroleum storage and supply facilities**
21. **Public healthcare institutions including hospitals and medical centres**
22. **Fire stations, police stations, ambulance stations, emergency coordination facilities.**

Replace the existing earthworks definition with the National Planning Standards Earthworks definition as follows:

Earthworks

means the alteration or disturbance of land including by moving, removing, placing, blading, cutting, contouring, filling or excavation of earth (or any matter constituting the land including soil, clay, sand, and rock); but excludes gardening, cultivation, and disturbance of land for the installation of fenceposts

Insert new definition for hazard mitigation works as follows:

Hazard Mitigation Works

means works intended to control the effects of natural hazards

Insert new definition for hazard sensitive building as follows:

Hazard Sensitive Building

means any building or buildings which:

1. **is/are used as part of the primary activities on the site; or**
2. **contains habitable rooms; or**
3. **which are serviced with a sewage system and connected to a potable water supply,**

For the purposes of clause 1, buildings such as the following are not included:

i. **farm sheds used solely for storage;**

ii. **carports;**

iii. **garden Sheds; and**

iv. **any buildings with a dirt/gravel or similarly unconstructed floor.**

Insert new definition of High Flood Hazard Area from the CRPS:

High Flood Hazard Area

High Flood Hazard Areas are subject to inundation events where the water depth (metres) x velocity (metres per second) is greater than or equal to 1 or where depths are greater than 1 metre, in a 0.2% annual exceedance probability flood event.

Insert new definition for land disturbance as follows:

Land Disturbance

means the alteration of land, (or any matter constituting the land including soil, clay, sand and rock) that does not permanently alter the profile, contour or height of the land.

Insert new definition for liquefaction area as follows:

Liquefaction Hazard

means land potentially at risk from liquefaction and lateral spread during an earthquake

Replace the existing definition of natural hazard with the RMA definition as follows:

Natural Hazard

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

Insert definition for Natural Hazard Mitigation Works

Natural Hazard Mitigation Works

means works intended to control the effects of natural events

Insert new definition for natural hazard overlays as follows:

Natural Hazard Overlays

identifies areas subject to a natural hazard. Natural hazard overlays include:

a. **Urban Flood Assessment Overlay**
b. **Non-urban Flood Assessment Overlay**
c. **Fault Avoidance Overlay**
d. **Fault Awareness Overlay**
e. **Landslide Debris Inundation Overlay**
f. **Debris Flow Fan Overlay**
g. **Liquefaction Hazard Overlay**

Insert new definition for operational need as follows:

Operational Need

means the need for a proposal or activity to traverse, locate or operate in a particular environment because of technical, logistical, operational characteristics or constraints.

Insert new definition for Plantation Forestry (as per NES definition):

Plantation forestry

plantation forest or plantation forestry means a forest deliberately established for commercial purposes, being—

(a) at least 1 ha of continuous forest cover of forest species that has been planted and has or will be harvested or replanted; and

(b) includes all associated forestry infrastructure; but

(c) does not include—

(i) **a shelter belt of forest species, where the tree crown cover has, or is likely to have, an average width of less than 30m; or**

(ii) **forest species in urban areas; or**

(iii) **nurseries and seed orchards; or**

(iv) **trees grown for fruit or nuts; or**

(v) **long-term ecological restoration planting of forest species; or**

(vi) **willows and poplars space planted for soil conservation purposes**

Insert new National Planning Standards definition for structure as follows:

Structure

means any building, equipment, device or other facility, made by people and which is fixed to land; and includes any raft.

Insert definition for shelterbelt as follows:

Shelterbelt

means any trees planted primarily to provide shelter for stock, crops, or buildings from wind, and which are no greater than 20m wide.

Insert new definition of woodlot as follows:

Woodlot

means a stand of trees for the purposes of firewood, the creation of other wood products, a carbon sink, erosion control, pest, or wilding tree management purposes, but excluding plantation forestry.

Chapter 7: Development and Tourism

Amend Policy 7.2.2(1) as follows:

7.2.2 Policies

1. To accommodate additional urban development only where the risk from **natural hazards** ~~**flooding, land instability and coastal erosion or inundation**~~ is **acceptable** ~~**low**~~.

(…)

Amend section 7.2.3 Implementation methods as follows:

(...)

2. Provision of rules and performance standards relating to the following:

- Connection to reticulated potable water supply and sewage treatment and disposal systems within urban areas where such systems exist.
- Development within areas ~~**prone to**~~ **affected by natural hazards** ~~**flooding and land instability**~~.

(…)

Amend explanation and reasons as follows:

(…)

Parts of Kaikōura township and surrounding land have a high probability of being flooded from the Kowhai River and other streams in the Kaikōura Plains catchment. Other natural hazards prevalent in the District include the threat of coastal erosion or inundation in coastal areas, **landslide debris inundation, debris flow fans, fault rupture, liquefaction** and **other** seismic hazards **and wildfire**.–In order to reduce risks to life and property, it is important that urban development **only occurs where the risk of natural hazards is acceptable.** ~~**does not take place in areas at high risk of being affected by natural hazards. For flood hazard and inundation, low flood risk generally means land which is outside the risk areas as indicated on the flood hazard maps, or for areas not included in these maps, where the probability of a flood event is less than a 10% chance in 50 years (0.2% Annual Exceedance Probability).**~~ The risk from coastal erosion is low on land outside the Coastal Hazard Lines, as shown in the Regional Council's Proposed Regional Coastal Environment Plan.

(…)

Instruction: Delete all of chapter 8, with the exception of the coastal hazards provisions.

Instruction: Undertake consequential re numbering to the coastal hazards provisions (the content of the coastal hazards provisions remains unchanged)

Insert new provisions in their entirety as follows:

8. Natural Hazards

8.1 Introduction

The Kaikōura District is susceptible to a wide range of natural hazards, including flooding, fault rupture, liquefaction, tsunami, debris flow fans, landslide debris inundation, and coastal inundation. Natural hazard events can damage property and infrastructure and can lead to injury or loss in human life. It is therefore important to identify areas subject to natural hazards and to restrict or manage subdivision, use and development.

This chapter focuses on the following natural hazards as they present the greatest risk to people and property, and the future effects can be addressed through appropriate land use planning measures.

- **Flooding:**
- **Landslide debris inundation,**
- **Debris flow fans:**
- **Fault rupture:**
- **Liquefaction: and**
- **Wildfire**

Some natural hazards are influenced by climate change. It is predicted that rainfall events will become more intense, storm events will become more common and sea level will rise. The flooding assessments required by this chapter will incorporate current climate change predictions based on the International Panel on Climate Change's advice and current practice in local government.

The district is also susceptible to other natural hazards such as severe winds, wildfires and ground shaking from earthquakes. These hazards are primarily managed by other statutory instruments or processes. For example, the Building Act 2004 deals with severe winds by use of building materials during construction.

The Canterbury Regional Policy Statement (CRPS) recognises that for existing urban areas the community has already accepted some natural hazard risk in order to support the ongoing development of the district's existing communities. The CRPS accordingly requires development in high hazard areas in these locations to be either avoided or mitigated.

Risk

Risk is a product of both the consequences (for example, loss of life or damage to properties) and likelihood from a natural hazard occurrence. A risk-based approach to natural hazards balances allowing for people and communities to use their properties and undertake activities, while also ensuring that their lives or significant assets are not likely to be harmed as a result of a natural hazard event.

The level of risk can be considered to be either acceptable or unacceptable. This is determined by:

- **The likelihood of the natural hazard event;**
- **The potential consequence of the natural hazard event for people and communities, property and infrastructure and the environment, and the emergency response organisations; and**
- **The consent process with the hazard overlays identifying areas for assessment.**

This chapter anticipates the use of mitigation measures where it is appropriate to do so. These measures can reduce the consequences from natural hazards and reduce the associated risk.

Potential mitigation measures that can be incorporated into developments to reduce the consequences of natural hazards include:

- **Building design and location (for example minimum floor levels or the ability for buildings to be relocated;**
- **Raising ground levels;**
- **The creation of flood water detention areas;**
- **The introduction, retention or improvement of existing natural systems that mitigate natural hazard effects;**
- **Use or size of materials in infrastructure design and building construction and location;**
- **The types of activities within buildings and structures;**
- **Provision of access to water sources for fire fighting**
- **Private mitigation works and community mitigation works**

The chapter sets out a framework for determining where development in certain hazard areas should be avoided, including in areas identified as High Flood Hazard.

The District Council is required under the Resource Management Act to control any actual or potential effects of the use, development, or protection of land including for the purpose of the avoidance or mitigation of natural hazard events.

The District Council and the Regional Council both have functions for avoiding or mitigating natural hazard events in the District.

This section has been removed from the flooding paragraph and replaced into the introduction of Chapter 8 and amended as follows:

The areas **potentially** at ~~**most**~~ risk from flooding are shown on the Proposed District Plan Map Series **as Flood Hazard Assessment Overlays** ~~**Part 4**~~. **Outside of the District Plan, the Regional Council also maintains flooding maps that indicate likely flow paths and depths for areas where more detailed flood modelling has been undertaken.** These areas are based on a geomorphological stud**ies** undertaken by the Regional Council **and LIDAR information** which incorporate historical flood data. While the flood hazard maps are based on the best available information, plan users should be aware that in extreme events, localised flooding or ponding may still occur on areas not marked as at-risk areas. ~~**In addition, the flood hazard maps relate to the Kaikoura Plains only, and there may be other areas in the District at risk from flood events.**~~ If there is any doubt as to the

flood risk, it is recommended that developers check with the Regional Council prior to planning any building project.

This paragraph is an Operative District Plan section that has been included as part of the replacement Chapter 8, but is greyed out as coastal hazards are outside the scope of the Natural Hazards Plan Change 3

Coastal erosion and inundation from the sea and tsunamis

Several sections of the Kaikoura coastline are subject to coastal erosion, and this erosion poses a threat to the main transport links which pass through the District. The November 2016 7.8M earthquake resulted in significant damage to Kaikoura where parts of the coast were uplifted. The North Canterbury Transport Infrastructure Recovery (NCTIR) has rebuilt the Road and Railway corridor to provide additional resilience to the coastal transport corridor.

Coastal erosion is widespread along the Kaikoura coastline and varies from -0.67 m/yr at Goose Bay to -0.29 m/yr at Oaro Beach. However, these rates are likely to vary significantly due to high intensity storms which can rapidly erode coastal areas. As a consequence of extreme weather events, some areas are potentially prone to inundation from the sea.

8.2 Objectives

8.2.1: Risk from natural hazards

New land use and development:

1. **is managed in the Urban Flood Assessment Overlay to ensure the risk to people and property is avoided or mitigated and the ability of communities to recover from natural hazards is maintained;**
2. **is avoided in High Flood Hazard Areas outside of the Urban Flood Assessment Overlay; and**
3. **is managed in in all other Hazard Overlays outside of High Flood Hazard Areas to acceptable level.**

8.2.2 Infrastructure

3. **Upgrading maintenance and replacement of existing infrastructure and new non-critical infrastructure within all-natural hazard overlays is enabled where the infrastructure does not increase the risk to life or property from natural hazard events, or transfer the risk to another site; and**
4. **New critical infrastructure avoids High Flood Hazard Areas, but where this is not possible or is impractical, is designed to maintain its integrity and ongoing function during and after natural hazard events or can be reinstated in a timely manner.**

8.3 Natural Hazard Policies

8.3.1 Identification of natural hazards

1. **Identify areas that may be susceptible to natural hazards through the use of natural hazard overlays, and use the most up to date information available to provide site specific natural hazard assessments;**

2. **Recognise that climate change will alter the frequency and severity of some natural hazard events, and ensure that natural hazard assessments, and any mitigation works take into account the effects of climate change**

8.3.2 Risk based approach

Take a risk based approach to managing natural hazards commensurate with the scale of development, whereby the level of risk is assessed as the combination of the likelihood of a natural hazard event occurring and the consequences of that event – for people and communities, property and infrastructure.

8.3.3 Additions to buildings in all hazard overlays

Provide for additions to existing hazard sensitive buildings within all natural hazard overlays where it can be demonstrated that:

1. the change in onsite risk resulting from the building addition to life and property is not unacceptable; and

2. the change in risk resulting from the building addition to adjacent properties, activities and people is not unacceptably increased.

8.3.4 Hazard mitigation works

Hazard mitigation works:

1. **undertaken by or on behalf of the Crown, Canterbury Regional Council or the Council are enabled for the purpose of reducing the risk to life and property from flooding where area wide mitigation is necessary to protect existing communities from natural hazard risk which cannot be reasonably avoided; or**
2. **not undertaken by the Crown, Canterbury Regional Council or Council, will only be acceptable where;**
    a. **natural hazard risk cannot be reasonably avoided;**
    b. **any adverse effects of those works on the natural and built environment and on the cultural values of Ngati Kuri are avoided, remedied or mitigated; and**
    c. **the mitigation works do not transfer or create unacceptable hazard risk to other people. Property. Infrastructure or the natural environment.**

8.3.5 Natural features providing natural hazard resilience

Restore, maintain or enhance natural features, such as natural ponding areas, coastal dunes, wetland, water body margins, and riparian vegetation, where they assist in avoiding or reducing natural hazards.

8.3.6 Operation, maintenance, replacement and repair of all infrastructure

Enable the operation, maintenance, replacement, repair or removal of all existing infrastructure in all identified natural hazard overlays

8.3.7 New and upgrading of non-critical infrastructure

1. **Enable the development of new non-critical infrastructure and upgrading of existing non-critical infrastructure in flood hazard assessment overlays only where the infrastructure does not increase flood risk on another site; and**
2. **Provide for the development of new non-critical infrastructure and upgrading of existing non-critical infrastructure in all other identified natural hazard overlays**

8.3.8 Critical infrastructure

1 **Enable the upgrading of existing critical infrastructure in Flood Assessment Overlays only where the infrastructure does not increase flood risk on another site;**

2 **Provide for upgrading of existing critical infrastructure in all other identified Natural Hazard Overlays;**

3 **Manage new critical infrastructure in all Natural Hazard Overlays which are outside of High Flood Hazard Areas to ensure that there is a low risk to life and property damage;**

4 **Avoid new critical infrastructure in High Flood Hazard Areas unless:**

- **a. Avoidance is impossible or impracticable, in which case critical infrastructure must be designed to maintain, as far as practicable, its integrity and ongoing operation during and after natural hazard events, or be able to be reinstated in a timely manner; and**
- **b. The critical infrastructure does not significantly increase the natural hazard risk to life, or increase risk to life and property on another site**

8.3.9 Earthworks

Manage earthworks to avoid significant offsite effects associated with the displacement of floodwaters.

8.3.10 High Flood Hazard Areas within the Urban Flood Assessment Overlay

Avoid land use and development for hazard sensitive buildings in High Flood Hazard Areas of the Urban Flood Assessment Overlay, as determined by a flood assessment certificate unless it can be demonstrated that;

1. **the nature of the activity means the risk to life and potential for damage from flooding is acceptable; or**
2. **minimum floor levels are incorporated into the design of the development to ensure buildings are located above the flood level so that the risk to life and potential for property damage from flooding is mitigated; and**
3. **the risk to surrounding properties is not significantly increased.**

8.3.11 High Flood Hazard Areas outside of the Urban Flood Assessment Overlay

Avoid land use and development for Hazard Sensitive Buildings outside of the Urban Flood Assessment Overlay in High Flood Hazard Areas as determined by a Flood Hazard Assessment Certificate, unless:

1. **the activity incorporates mitigation measures so that the risk to life and property damage is acceptable**
2. **the risk to surrounding properties is not increased; and**
3. **the activity does not require new or upgraded community scale mitigation works.**

8.3.12 Flooding outside of High Flood Hazard Areas

Provide for land use and development for Hazard Sensitive Buildings outside of High Flood Hazard Areas as determined by a Flood Hazard Assessment Certificate where it can be demonstrated that;

1. **the nature of the activity means the risk to life and potential for damage from flooding is acceptable; or**
2. **the activity is ancillary to the existing main development; or**
3. **buildings are located above the flood level so that the risk to life is acceptable and potential for property damage from flooding is mitigated; and**
4. **the risk to surrounding properties is not significantly increased.**

8.3.13 Debris Flow Fan Overlay and Landslide Debris Inundation Overlay

Land use and development is avoided for Hazard Sensitive Buildings in the Debris Flow Fan Overlay and Landslide Debris Inundation Overlay which results in unacceptable risk to either life or property.

8.3.14 The Fault Avoidance Overlay and Fault Awareness Overlay

Land use and development is:

1. enabled only where there is an acceptable risk to life and property;

2. avoided for Hazard Sensitive Buildings in the Fault Avoidance Overlay where these result in an unacceptable risk to life and property;

3. managed for Hazard Sensitive Buildings in the Fault Awareness Overlay by locating the building away from the fault or where it can be demonstrated that mitigation measures will result in an acceptable risk to life and property;

8.3.15 Other natural hazards

Encourage the consideration of other natural hazards such as wildfire as part of land use and development.

This section is an Operative District Plan section that has been included as part of the replacement Chapter 8, but is greyed out as coastal hazards are outside the scope of the Natural Hazards Plan Change 3

8.4 Coastal Hazards

Coastal erosion, tsunami, storm events and saltwater inundation have the ability to cause damage to property and threaten life.

Objective 1

To avoid damage to assets or infrastructure, disruption to the community and loss of life as a result of coastal hazard events.

Policies

1. **To avoid subdivision, use and development that increases the risk to people and property from coastal hazard events.**
2. **To permit the establishment of new protection structures in the coastal environment only where they are the best practicable option for the future and so that adverse effects are avoided to the extent practicable. When considering any application to renew or replace existing structures, the abandonment or relocation of those structures will be considered among the options.**
3. **To recognise and enhance the ability of natural features such as hard rock shorelines, beaches, sand dunes and wetlands to protect the built environment from coastal hazard events and to recognise that some natural features may migrate inland as the result of dynamic coastal process including sea level rise..**
4. **To recognise the possibility of sea level rise, to monitor predictions and research relating to sea level rise, and to vary or amend the District Plan as and when necessary so that effects of sea level rise are mitigated or avoided.**

Implementation Methods

1. **To control subdivision in areas subject to coastal hazards.**
2. **Co-operate with the Regional Council, and consultation with interested people and organisations, including Te Runanga o Ngai Tahu, in the maintenance and construction of coastal protection works.**
3. **Support the inclusion of rules in Regional Plans of the Regional Council, in relation to activities located in areas subject to the effects of coastal erosion and inundation.**
4. **Avoid the duplication of relevant provisions, including rules, in the Proposed Kaikoura District Plan and Regional Council plans.**
5. **Through the Council's annual planning process discourage activities which increase the rates of coastal erosion by providing information or advice to adjacent landowners.**

Explanation and Reasons

Past experience indicates that once assets are threatened by coastal erosion and inundation, there is pressure to provide physical protective works, especially where high value assets are involved. However, such works are often ineffectual, costly and have an adverse effect on the environment. Such structures should only be established when they are the best practicable option. Therefore, where possible, it is preferable to locate assets away from hazard prone areas rather than build protective works. This is consistent with the direction taken by the New Zealand Coastal Policy Statement.

8.5 Natural hazard rules

Activities

Activities specified in the following table shall be assessed as permitted, restricted discretionary, or non-complying as shown.

8.5.1 **All zones**	**Any plantation forestry, woodlot or shelterbelt that complies with the following separation distances, measured from the outside extent of the canopy:** **a. 30m from any hazard sensitive building on an adjoining property.** **Activity status when compliance is not achieved**	**Permitted** **Restricted discretionary**
8.5.2 **All zones within the:** **URBAN FLOOD HAZARD ASSESSMENT OVERLAY**	**The establishment of any hazard sensitive building where it:** **a. Is located on land outside of High Flood Hazard Areas;** **b. Has a finished floor level equal to or higher than the minimum floor level;** **as stated in a FLOOD ASSESSMENT CERTIFICATE issued in accordance with activity standard 8.6.1** **Activity status when compliance is not achieved**	**Permitted** **Restricted Discretionary** **Matters of discretion are restricted to:** **1. The likely extent of flooding on the site** **2. the nature, design, and intended use of the building and its susceptibility to damage;** **3. proposals to mitigate any risk arising from natural hazards on the site, including risk to the health and safety of occupants;**

		4. the extent of any positive effects from the proposal.
8.5.3 **All zones within the:** **NON-URBAN FLOOD HAZARD ASSESSMENT OVERLAY**	**The establishment of any new hazard sensitive building where it:** **a. Is located on land outside of High Flood Hazard Areas;** **b. Has a finished floor level equal to or higher than the minimum floor level;** **As stated in a FLOOD ASSESSMENT CERTIFICATE issued in accordance with activity standard 8.6.1** **Activity status where compliance with rule 8.5.2.a is not achieved** **Activity status where compliance with rule 8.5.2.b is not achieved**	**Permitted** **Non-complying** **Restricted discretionary** **Matters of discretion are restricted to:** **1. The likely extent of flooding on the site;** **2. The nature, design and intended use of the building and its susceptibility to damage;** **3. Proposals to mitigate any risk created by any failure to meet minimum finished floor levels, including risk to the health and safety of the occupants;** **4. the extent of any positive effects from the proposal.**
8.5.4 **All zones within the:** **DEBRIS FLOW FAN OVERLAY; or** **LANDSLIDE DEBRIS INUNDATION OVERLAY**	**The establishment of any new hazard sensitive building**	**Restricted discretionary** **Matters of discretion are restricted to:** **1. The extent of debris flow or landslide inundation hazards on the site;** **2. The nature, design and intended use of the building, or structure and its susceptibility to damage;** **3. Proposals to mitigate any risk arising from debris flow or landslide debris inundation hazards on the site;** **4. Whether there is unacceptable risk to either life or property.**

8.5.5 **All zones within the:** **FAULT AVOIDANCE OVERLAY; or** **FAULT AWARENESS OVERLAY**	**The establishment of any new hazard sensitive building**	**Restricted discretionary** 1. **The likely fault rupture hazards on the site;** 2. **The nature design and intended use of the building or structure and its susceptibility to damage;** 3. **Proposals to mitigate any risk arising from fault rupture hazards on the site, including risk to the health and safety of occupants.**
8.5.6 **All zones within the:** **URBAN FLOOD ASSESSMENT OVERLAY; or** **NON-URBAN FLOOD ASSESSMENT OVERLAY; or** **DEBRIS FLOW FAN OVERLAY; or** **LANDSLIDE DEBRIS INUNDATION OVERLAY; or** **FAULT AVOIDANCE OVERLAY; or** **or FAULT AWARENESS OVERLAY**	**Additions to existing hazard sensitive buildings that:** a. **do not increase the floor area by more than 25m2 in any continuous 5-year period; or** b. **If located within a flood assessment overlay, have a finished floor level equal to or higher than the minimum floor level as stated in a FLOOD ASSESSMENT CERTIFICATE issued in accordance with activity standard 8.6.1.** **Activity status when compliance is not achieved**	**Permitted** **Restricted discretionary** **Matters of discretion are restricted to:** 1. **The natural hazard risk on the site** 2. **The nature, design and intended use of the building or structure and its susceptibility to damage;** 3. **Proposals to mitigate any risk arising from natural hazards on the site, including risk to the health and safety of occupants;** 4. **The potential to exacerbate natural hazard risk, including to any other site; and** 5. **The extent of any positive effects from the proposal.**
8.5.7 **All zones within the:** **URBAN FLOOD**	**Above ground earthworks, buildings and new structures that** **a. will not worsen flooding on another property through the diversion or displacement of floodwaters; or**	**Permitted**

ASSESSMENT OVERLAY; or **NON-URBAN FLOOD ASSESMENT OVERLAY**	**b. meet the definition of land disturbance** **Activity status when compliance is not achieved**	**Restricted discretionary** **Matters of discretion are restricted to:** **1. The likely extent of flooding on the site;** **2. The potential for the activity to exacerbate flooding on any other site; and** **3. The extent to which the earthworks or new structure impedes the free passage of floodwaters**
8.5.8 **All zones within the:** **URBAN FLOOD ASSESSMENT OVERLAY; or** **NON-URBAN FLOOD ASSESSMENT OVERLAY**	**New infrastructure, or upgrading of infrastructure and critical infrastructure where:** **a. The activity does not result in permanent raising of the ground level.** **Activity status when compliance is not achieved**	**Permitted** **Restricted discretionary** **Matters of discretion are restricted to:** **1. The likely extent of flooding on the site;** **2. The nature, design and intended use of the infrastructure and its susceptibility to damage;** **3. The potential for the activity to exacerbate natural hazard risk, including to any other sites; and** **4. The extent of any positive effects from proposal.**
8.5.9 **All zones within the:** **URBAN FLOOD ASSESSMENT OVERLAY; or** **NON-URBAN FLOOD ASSESSMENT OVERLAY; or** **LANDSLIDE DEBRIS INUNDATION OVERLAY; or**	**New critical infrastructure**	**Restricted discretionary** **Matters of discretion are restricted to:** **1. The extent to which infrastructure exacerbates the natural hazard risk or transfers the risk to another site;** **2. The ability for flood water conveyance to be maintained;** **3. The extent to which there is a functional or operational requirement for the infrastructure to be located in the High Flood Hazard Overlay and there are no practical alternatives;** **4. The extent to which the location and design of the infrastructure address relevant natural hazard risk and appropriate measures that have been incorporated into the design to provide for the continued operation**

FAULT AVOIDANCE OVERLAY; or **or FAULT AWARENESS OVERLAY**		
8.5.10. **All zones within the:** **URBAN FLOOD ASSESSMENT OVERLAY; or** **NON-URBAN FLOOD ASSESSMENT OVERLAY**	**The change of use of any existing building that is not currently a hazard sensitive building to a hazard sensitive building where the activity:** **a. Is located on land outside of High Flood Hazard Areas; and** **b. Has a finished floor level equal to or higher than the minimum floor level.** **As stated in a FLOOD ASSESSMENT CERTIFICATE issued in accordance with activity standard 8.6.1** **Activity status when compliance with rule 8.5.9.a is not achieved** **Activity status when compliance with rule 8.5.9.b is not achieved**	**Permitted** **Non-complying** **Restricted discretionary** **Matters of discretion are restricted to:** **1. The likely extent of flooding on the site;** **2. The nature, design and intended use of the building or structure and its susceptibility to damage with reference to the hazard sensitivity classification 8.6.1** **3. Proposals to mitigate any risk created by the failure to meet minimum finished floor levels, including risk to the health and safety of occupants;** **4. The proposals for the activity to exacerbate natural hazard risk, including to any other sites; and** **5. The extent of any positive effects from the reduction in floor levels**
8.5.11 **All zones within the:**	**The change of use of any existing building that is not currently a hazard sensitive building to a hazard sensitive building**	**Restricted discretionary** **Matters of discretion are restricted to:** **1. The nature, design and intended use of the building or structure;** **2. An assessment of natural hazards on the site;**

DEBRIS FLOW FAN OVERLAY; or **LANDSLIDE DEBRIS INUNDATION OVERLAY; or** **FAULT AVOIDANCE OVERLAY; or** **FAULT AWARENESS OVERLAY**		**3. Proposals to mitigate any risk arising from natural hazards on the site, including risk to the health and safety of occupants;** **4. The potential for the activity to exacerbate natural hazard risk, including to any other sites; and** **5. The extent of any positive effects of the proposal.**
8.5.12 **All zones within the:** **URBAN FLOOD ASSESSMENT OVERLAY; or** **NON-URBAN FLOOD ASSESSMENT OVERLAY**	**The establishment of any new camping grounds where:** **1. the land is not susceptible to flooding in a 500 year ARI flood event:** **as stated in a FLOOD ASSESSMENT CERTIFICATE issued in accordance with activity standard 8.6.1.** **Activity status when compliance is not achieved**	**Permitted** **Restricted discretionary** **Matters of discretion are restricted to:** **1. An assessment of natural hazards on the site;** **2. Proposals to mitigate any risk arising from natural hazards on the site, including risk to the health and safety of occupants;** **3. The potential for the activity to exacerbate natural hazard risk, including to any other sites; and** **4. The extent of any positive effects of the proposal.**
8.5.13 **All zones within the:** **FAULT AVOIDANCE OVERLAY; or**	**The establishment of any new Camping grounds**	**Restricted Discretionary** **Matters of discretion are restricted to:** **1. An assessment of natural hazards on the site;** **2. Proposals to mitigate any risk arising from natural hazards on the site, including risk to the health and safety of occupants;**

LANDSLIDE DEBRIS INUNDATION OVERLAY		**3. The potential for the activity to exacerbate natural hazard risk, including to any other sites; and** **4. The extent of any positive effects of the proposal.**

8.6 Natural hazards standards

8.6.1 Flood assessment certificate within the Urban and Non-urban Flood Assessment Overlays

A flood assessment certificate will be issued by Council (that is valid for three years from the date of issue) which specifies:

1. **whether or not the activity is located on land that is within a High Flood Hazard Area; and**
2. **where the activity is located on land that is within the Urban Flood Assessment Overlay, a minimum finished floor level for any new building or extension (or part thereof) that is 300mm above the 500 year ARI flood level; and**
3. **where the activity is located on land that is within the Non-Urban Flood Assessment Overlay outside of High Flood Hazard Areas, a minimum finished floor level for any new building or structure (or part thereof) that is 300mm above the 500year ARI flood level; or**
4. **for campgrounds, whether the land is susceptible to flooding in a 500 year ARI flood event**

The above will be determined with reference to:

a. **The most up to date models and maps held by Kaikōura District Council or Canterbury Regional Council; and**
b. **Any relevant field information**

Amend note 1 as follows and add in new note, note 3:

Note:

1. Subdivision of any land located within the **Natural Hazard Overlays** ~~**flood hazard areas 1, 1a, 2, 2a, or P**~~ is ~~**controlled**~~ addressed in ~~**Section**~~ **Chapter** 13 Subdivision.~~**, Rule 13.11.2.**~~

(…)

~~**3. 0.2% AEP Annual Exceedence Probability. equates to a 10% chance in 50 years of a building or site being subject to inundation from a flood event.**~~

Amend 13.2 Issue 1 as follows:

Chapter 13: Subdivision

13.2 Issue 1 - Natural Hazards

Land **may ~~likely~~ ~~to~~** be subject to damage by erosion, subsidence, **fault rupture, liquefaction, flooding, landslide debris inundation, debris flow fans, ~~slippage~~ or flooding**. **~~inundation from any source should not be subdivided unless the adverse effects can be avoided, remedied or mitigated~~**.

Amend 13.2.1 Objective 1 as follows:

13.2.1 Objective 1

To avoid subdivision in localities where it is likely to increase risk to people or property from erosion, sea level rise, subsidence, **fault rupture, liquefaction, flooding, landslide debris inundation and debris flow fans ~~slippage or inundation from any source~~**, unless this risk can be remedied, avoided or mitigated without significant adverse effects on the environment.

Insert new subdivision policy as follows:

13.2.2 Policies

(...)

7. **Manage subdivision within all natural hazard overlays to ensure risk to life and property is acceptable**

Subdivision Rules

Amend 13.11.1 as follows:

13.11 Subdivision Activities

13.11.1 Controlled Subdivision Activities

Except as provided for in 13.11.2, 13.11.3, **~~and~~** 13.11.4 **and 13.11.5** below, any subdivision which complies with all performance standards shall be a Controlled subdivision activity with Council's control being reserved to the following matters:

(…)

Natural Hazards

— Provision of protection works, and measures to avoid, remedy or mitigate effects of such works, the location and type of services, building location, and location and quantity of filling and earthworks that

could be affected by the following natural hazards or which could affect the impact of those natural hazards on the site or other land in the vicinity.

(…)

— **Liquefaction within the Liquefaction Hazard Overlay, with the matters of control restricted to:**
  1. **Geotechnical recommendations from a site-specific geotechnical assessment of liquefaction hazard, including testing of soils;**
  2. **Location, size and design of the subdivision, roads, access, services;**
  3. **Recommendations for foundations for future buildings;**
  4. **Remediation and ground treatment**

(…)

Insert new 13.11.2 restricted discretionary activity rule as follows:

13.11.2 Restricted Discretionary Subdivision Activities

Subdivisions locating a new hazard sensitive building platform within:
1. **the Urban Flood Assessment Overlay;**
2. **the Non-Urban Flood Assessment Overlay outside of a High Flood Hazard Area as stated in a FLOOD ASSESSMENT CERTIFICATE issued in accordance with activity standard 8.6.1;**
3. **the Debris Flow Fan Overlay;**
4. **the Landslide Debris Inundation Overlay; or**
5. **the Fault Awareness Overlay.**

Matters of discretion are restricted to:
1. **Geotechnical recommendations from a site-specific geotechnical assessment of hazards, including testing of soils;**
2. **Flooding mitigation recommendations from a site-specific flooding assessment;**
3. **Location, size, and design of the subdivision, roads, access, services and the extent to which natural hazard risk is managed;**
4. **Recommendations for foundations for future buildings and ground remediation;**
5. **The level of risk; and**
6. **The potential effects of mitigation measures.**

Renumber 13.11.2 Discretionary Subdivision Activities to 13.11.3

Renumber 13.11.3 Non-complying Subdivision Activities to 13.11.4 and amend as follows:

13.11.**4**~~3~~ Non-complying Subdivision Activities

(…)

4. **Any subdivision locating a platform for a new hazard sensitive building within the Fault Avoidance Overlay;**
5. **Any subdivision locating a platform for a new hazard sensitive building within a High Flood Hazard Area within the Non-urban Flood Assessment Overlay as stated in a FLOOD ASSESSMENT CERTIFICATE issued in accordance with activity standard 8.6.1.**

Renumber 13.11.4 to 13.11.5

Make consequential amendments to numbering cross references to Table 13.12.1.a

Appendix 6: Proposed District Plan Map Series – Natural Hazards Plan Change 3