

PROPOSED INVERCARGILL CITY DISTRICT PLAN

Decision No. 15

Natural Hazards

Hearings Committee

Councillor Darren Ludlow (Chair)
Councillor Neil Boniface
Councillor Graham Sycamore
Keith Hovell

11 October 2016

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INTRODUCTION

We have been appointed by the Invercargill City Council to consider and issue decisions on the submissions lodged to the Proposed Invercargill City District Plan. In this decision we consider the submissions lodged in relation to "natural hazards" issues.

The Resource Management Act 1991 sets out various matters that impact on our considerations and deliberations. The key provisions are Sections 5 - 8, 32, 75 and 76 of the Act, and the Second Part of the First Schedule to the Act. The Section 42A Report prepared for the Committee considered these matters in detail and we have had regard to them. Where the statutory provisions are of particular significance we have referred to them within this Decision.

In this Decision, the following meanings apply:

"AEE" means Assessment of Environmental Effects.

"The Council" means the Invercargill City Council.

"FS" means Further Submission.

"Further Submitter" means a person or organisation supporting or opposing a submission to the Proposed Plan.

"Hearings Committee" or "the Committee" means the District Plan Hearings Committee established by the Council under the Local Government Act.

"Operative Plan" or "Operative District Plan" means the Invercargill City District Plan 2005.

"Proposed Plan" or "Proposed District Plan" means the Proposed Invercargill City District Plan 2013.

"Proposed RPS" means the Proposed Southland Regional Policy Statement 2012.

"RMA" means the Resource Management Act 1991.

"Submitter" means a person or body lodging a submission to the Proposed Plan.

At the commencement of the hearings, Crs Boniface and Ludlow declared an interest as Directors of PowerNet Limited, Cr Sycamore declared an interest as a Director of Invercargill City Holdings Limited and Commissioner Hovell declared a conflict of interest in relation to submissions lodged by Cunningham Properties Limited. The Councillors and Commissioner took no part in deliberations in relation to the submissions of the submitters referred to.

THE HEARING TO CONSIDER SUBMISSIONS LODGED TO THE PROPOSED PLAN

The hearing to consider the submissions lodged to the Proposed District Plan with regard to natural hazards was held in the Council Chambers of the Invercargill City Council on 29 September 2014

Section 42A Report

The Hearings Committee received a report from William Watt of William J Watt Consulting Limited in which he noted that the Natural Hazards provisions of the Proposed Plan attracted 61 points from submitters, of which 23 were made by Environment Southland. He also noted that most submission points were either supportive or sought only minor corrections to or clarifications of the Plan provisions.

Mr Watt advised that Sections 5 and 7 of the RMA require the Council to promote "sustainable management" and have "particular regard" to natural hazard issues, including

those associated with climate change. He also referred to the New Zealand Coastal Policy Statement that requires planning for the effects of sea level rise, and the Regional Policy Statement which includes a specific policy on planning to avoid or mitigate the effects of the range of natural hazards to which the Invercargill City District is subject.

Having regard to various regional and city wide studies and reports Mr Watt described the following hazards that required to be recognised in the proposed Plan:

- Riverine inundation
- Earthquake
- Liquefaction
- Weather hazards
- Sea level rise
- Coastal erosion

In response to the submissions lodged, Mr Watt recommended a number of minor changes to the wording of provisions in the Proposed Plan. These generally did not alter the intent of those provisions.

Submitters Attending the Hearing

Jenny Campbell

Jenny Campbell spoke briefly to the Committee stressing that everything is connected and with climate change the potential impacts on taonga and the coastal margins is dramatic. She stressed the need to raise awareness of the potential impacts and requested that the Council work with Environment Southland to achieve that.

Material Tabled at the Hearing

<u>Transpower New Zealand Limited</u>

Mike Hurley, Senior Environmental Planner at Transpower, advised that Transpower accepted the recommendations in the Section 42A Report.

Invercargill Airport Limited

Kirsty O'Sullivan of Mitchell Partnerships Limited, advised on behalf of Invercargill Airport Limited that the recommendations made on submissions to Objective 1 and Policy 4 were supported. However, in relation to Method D, Mrs O'Sullivan advised that it is unrealistic not to include reference to economic viability, particularly having regard to the scale of infrastructure in the hazard prone area and the technical nature of the services it provides.

Alliance Group Limited

Kirsty O'Sullivan of Mitchell Partnerships Limited, advised on behalf of Alliance Group Limited that the recommendation made on submissions to Objective 1 was supported. However, in relation to Method D, she reiterated her comments made on behalf of Invercargill Airport Limited.

Environment Southland

Gavin Gilder, Resource Planner at Environment Southland, advised that Environment Southland supported all but one of the recommendations in the Section 42A Report. In relation to Submission 18.61 on page 41 of the Section 42A report Mr Gilder commented that the use of the words "has been identified" conjured up an expectation of a map, but the

land below three metres above mean sea level around Bluff on the open coast has not been shown on the District Hazard Information Maps, as is the case for land around the New River Estuary. He therefore requested the following change to the fourth paragraph of the Introduction:

Sea level rise/storm surge has been identified as is a natural hazard in respect of land adjoining the open sea coast, Bluff Harbour, the New River Estuary and tidal tributaries. The areas below three metres above mean sea level are most at risk from storm surge and sea level rise over the next 100 years or so. The areas below three metres above mean sea level adjoining the New River Estuary and the tidal tributaries have been mapped.

THE HEARING TO CONSIDER SUBMISSIONS LODGED TO VARIATION 1

The hearing to consider the submissions lodged to Variation 1 was held in the Council Chambers of the Invercargill City Council on 14 March 2016.

Section 42A Report

The Hearings Committee received a report from Liz Devery, Senior Policy Planner at the Invercargill City Council, with respect to Variation 1. In that report Mrs Devery outlined the purpose of Variation 1 was to include a non-complying activity rule applying to new dwellings and extensions to existing dwellings greater than 50 square metres in area within the Riverine Inundation Areas 2 and 2A. She noted that two submissions were lodged to the Variation, with one in support and the other seeking clarification on the implementation of the rules on natural hazards. She advised that there were no new matters raised in the submissions and she recommended that the new rule be included in the Proposed Plan as notified.

In response to questions from the Committee Mrs Devery accepted that for clarity the rule should refer to "any extension to the footprint of a residence". She agreed that this was a minor change that could be made under Clause 16(2) of the Second Schedule.

Submitters Attending the Variation Hearing

No submitters attended the Variation hearing.

Material Tabled at the Variation Hearing

Environment Southland

Gavin Gilder, Resource Planner at Environment Southland, advised by email that Environment Southland agreed with the content of the Section 42A Report.

MATTERS REQUIRING PARTICULAR CONSIDERATION

Extent of Amendments recommended in the Section 42A Report

Mr Watt in his Section 42A Report recommended an additional paragraph (C) to Rule 3.12.1 to clarify that the erection or extension of an existing residence, which would result in a floor level below a minimum floor level prescribed on the District Hazard Information Maps, is a non-complying activity. He advised that an error in the drafting of Rule 3.12.1 meant that a provision to this effect had been omitted, and for the entire rule to be robust and complete its

inclusion was necessary.

The Committee was not aware of any submission that authorised the inclusion of the recommended additional rule. Michael Morris, Legal Adviser, in response to a question from the Committee advised that in his view Clause 16 of the First Schedule could not be used to insert the additional rule into the Proposed Plan. He explained that Clause 16 allowed for minor changes to be made to District Plans that were neutral in nature. However, in this instance the additional rule had the potential to impinge on the rights of individuals and as a consequence an opportunity should be available for any person to lodge a submission in relation to it. It was the conclusion that the rule could only be included in the Proposed Plan by way of a variation.

The Committee has accepted the advice of Mr Morris. It also accepted that Rule 3.12.1 is flawed by the omission of paragraph (C) as set out in the Report from Mr Watt. As a consequence, the Committee recommended the Invercargill City Council to notify a Variation to rectify this omission. That has duly been done as referred to above.

SECTION 32 MATTERS

Requirements

The Committee was advised by Mr Watt that Section 32 of the RMA establishes the framework for assessing objectives, policies and rules proposed in a Plan, and that a Report was released at the time of notification of the Proposed Plan in compliance with those provisions. The Committee was also advised that Section 32AA of the RMA requires a further evaluation to be released with decisions outlining the costs and benefits of any amendments made after the Proposed Plan was notified, with the detail of the assessment corresponding with the scale and significance of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the changes made to the Proposed Plan.

As the Committee understands its obligations, it is required to:

- (i) Assess any changes made to objectives to determine whether they are the most appropriate way to achieve the purpose of the RMA.
- (ii) Examine any changes made to the policies and rules to determine whether they are the most appropriate way to achieve the objectives of the Proposed Plan. This includes:
 - Identifying the costs of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions (including effects on employment and economic growth)
 - Identifying other reasonably practicable options for achieving the objectives; and
 - Assessing the efficiency and effectiveness of the provisions in achieving the objectives.

The Committee however, is not required to assess in accordance with Section 32 of the RMA any changes to the issues and/or explanatory text of provisions.

Mrs Devery in her report on Variation No. 1 advised the Committee that there were no additional matters arising from the Variation to which the Committee needed to have regard.

Assessment

This decision amends the layout of several provisions and makes minor changes to others and their explanations. Mr Watt in his Section 42A Report advised the Committee as follows:

The natural hazard and subdivision sections of the original Section 32 report (pages 85 – 92 and 105 – 114) are relevant to this report. The changes proposed are within the scope of the original evaluation findings and do not raise any additional matters of consideration.

The changes that are recommended are minor. It follows that the environmental, economic, social or cultural effects anticipated to arise as a consequence of the changes are minor. A detailed assessment or quantification of costs and benefits is neither practical nor necessary with respect to the plan provisions pertaining to natural hazard.

For those decisions that reflect the recommendations made by Mr Watt in his Section 42A Report, the Committee agrees with that approach and adopts it. The Committee also accepted the advice of Mrs Devery that there were no additional matters arising from the Variation that required consideration.

This decision introduces Rule 3.12.4 which sets out the circumstances where asset management authorities are able to undertake earthworks in relation to stopbanks and in relation to coastal sand dunes. This differs from Mr Watt's recommendations and as such requires further assessment under Section 32. Due to the minor nature of this change, it is not necessary or practical to evaluate in detail or quantify the economic, social, cultural, environmental and employment effects of the changes. Stopbanks and coastal sand dunes are recognised as having an important role in minimising natural hazard effects, as set out in 2.11.3 Policy 9. It is appropriate to permit asset management authorities to carry out certain earthworks in these areas as the earthworks permitted is limited to activities that will maintain and enhance the function of these assets and their role in managing hazard risk. It is reasonable to enable authorities with financial responsibility for roads, stopbanks and waterways to undertake necessary works without the need to obtain resource consent approval. The risks of taking this approach are minimal, given the role of the asset management authorities provided for within the definition.

Dated at Invercargill this 11th day of October 2016

Councillor Darren Ludlow (Chair)

Councillor Graham Sycamore

Keith Hovell

Councillor Neil Boniface

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SUBMISSION	DECISION
GENERAL	
2.4 Bluff Community Board There is a lack of information for the Bluff area regarding tsunami and earthquake disasters. The draft District Plan should include the readily available information from the NZ Aluminium Smelters commissioned disaster modelling report and Civil Defence information. FS2.35 NZAS Ltd opposes Submission 2.4 as the report may be superseded over the life of the Plan.	Decision 15/1 This submission is rejected. Amendments to District Plan None required. Reason The "Natural Hazards" section of the Plan was based on the most up to date information available at the time of writing. While it is agreed that updated hazard information is desirable, the Bluff township area and Island Harbour have not yet been subject to the same level of modelling as there has been for the Tiwai Peninsula, and the information is simply not available.
56.14 Jenny Campbell The submitter considers that in light of present and increasing climate change and disruption, it is essential that natural hazards are taken seriously and impending sea level rise and more frequent climate disruption incidents be given greater weight in the Plan.	Decision 15/2 This submission is rejected. Amendments to District Plan None required. Reason The Proposed District Plan develops planning policy as far as it can on the basis of the most up to date information available. It is agreed that as new information comes to hand, it needs to be continually reviewed for its implications for planning policy.
64.33 Department of Conservation The submitter is particularly supportive of the provisions regarding the coastal environment as it considers they are consistent with Part 2 and Section 106 of the RMA and gives effect to the NZCPS 2010. Retain the objectives, policies, methods and rules.	Decision 15/3 This submission is noted. Amendments to District Plan None required. Reason The submitter supports the District Plan provisions, and while minor changes are being made to them the overall intent remains.

SUBMISSION	DECISION	
116.3 Kylie Fowler The submitter would like to see the activity type, in particular bulk storage of chemicals, to be considered within tsunami areas within Bluff. The submitter would like to have a long term phase-out policy for some activities in the at-risk tsunami and liquefaction areas. FS7.30 South Port NZ Ltd opposes Submission 116.3. The further submitter notes that there are activities, such as ports, with a functional need of locating within a tsunami risk area.	 Decision 15/4 This submission is rejected. Amendments to District Plan None required. Reasons The Plan as notified responds to natural hazard risks. In general, the Plan seeks to increase awareness of, and reduce exposure to, natural hazards. The tsunami risk for Bluff has not yet been modelled or quantified and in the interim the Plan contains precautionary measures based on current knowledge. 	
117.10 Southern District Health Board The submitter agrees with the issues, objectives, policies and rules, in particular Method (C). However, the submitter notes that the format for the methods of implementation is set out differently to the other sections of the Proposed District Plan. Decision Sought: Reformat the Methods of Implementation section to be consistent with the other sections of the Proposed District Plan.	Amendments to District Plan Adopt numbering for the Methods (A) – (F) in Section 2.11.4.	
SECTION TWO - ISSUES, OBJECTIVES AND POLICIES		
Natural Hazards		
2.11 Introduction		
18.60 Environment Southland The submission concerns the third paragraph of the Introduction which states that the majority of the district is located on modified floodplains. The submitter believes that is not correct – a significant part of the district is but not "the majority".	Decision 15/6 This submission is accepted. Amendments to District Plan Amend paragraph 3 of the Introduction to read: The majority A significant part of the District is located on modified flood	

SUBMISSION	DECISION
<u>Decision Sought</u> : Replace the words "The majority" with "A significant part" of the district	plains which historically have experienced periodic inundation and watercourse change. Reason A minor wording clarifies the statement.
The fourth paragraph of the Introduction states that "Sea level rise/storm surge has been identified as a natural hazard in respect of land adjoining the open coast, Bluff Harbour, the New River Estuary and tidal tributaries." The submitter believes that this statement is not quite correct because this hazard has only been identified around the New River Estuary and tidal tributaries. Decision Sought: Amend the fourth paragraph to read: Sea level rise/storm surge has been identified as a natural hazard in respect of land adjoining the New River Estuary and tidal tributaries	Decision 15/7 This submission is accepted in part. Amendments to District Plan Amend the fourth paragraph of the Introduction to read: Sea level rise/storm surge has been identified as a natural hazard in respect of land adjoining the open sea coast, Bluff Harbour, the New River Estuary and tidal tributaries. The areas below three metres above mean sea level are most at risk from storm surge and sea level rise over the next 100 years or so. The areas below three metres above mean sea level adjoining the New River Estuary and the tidal tributaries have been mapped and are shown on the District Hazard Information Maps. Reason Within the context of the entire paragraph, and consistent with information held by the Council, the statement referred to is correct. However, given the areas below the three metre contour are being shown on the District Hazard Information Maps it is appropriate to refer to that.
18.62 Environment Southland The submitter suggests that reference is made Puysegur Subduction Zone, the risk of amplified ground shaking in lower lying areas and more recent estimates of the likelihood and severity of an Alpine Fault earthquake (the current estimate was developed in the year 2000). The submitter also suggests the abbreviation MM be expanded to the full term, Modified Mercalli, to be consistent with Section 2.11.3 Policy 5.	Decision 15/8 This submission is accepted. Amendments to District Plan None required. Reason Amend the fifth paragraph of the Introduction at 2.11 to read:
Decision Sought: amend the fifth paragraph to read as follows:	The District, like the rest of New Zealand, is susceptible to seismic activity. A major rupture of the Alpine Fault is understood to have a 6 — 14% probability occurrence within

SUBMISSION DECISION

The district, like the rest of New Zealand, is susceptible to seismic activity. A major rupture of the Alpine Fault is understood to have a 30% chance in the next 50 years. The district is also at risk of earthquakes in the Puysegur Subduction zone to the south-west of the South Island. The best information available to the Council indicates that a Modified Mercalli VIII earthquake is the 475 year return period earthquake event allowing for the risk of amplified ground shaking due to the nature of the underlying soils. The lower lying areas of the Invercargill district have a high, or very high susceptibility to liquefaction.

the next 20 years 30% chance in the next 50 years. The District is also at risk of earthquakes in the Puysegur Subduction zone to the south-west of the South Island. The best information available to the Council indicates that a Modified Mercalli VIII earthquake is the 475 year return period earthquake event⁷ allowing for the risk of amplified ground shaking due to the nature of the underlying soils. The lower lying areas of the Invercargill District have a high, or very high, susceptibility to liquefaction.

2.11.1 Issues

18.63 Environment Southland

The submitter supports the issues as stated (except for Issue 3) and seeks their retention.

18.64 Environment Southland

The submitter believes the second sentence of Issue 3 contains questionable judgement and is not necessary, and seeks its deletion.

Decision 15/9

- (i) Submission 18.63 Environment Southland is noted.
- (ii) Submission 18.64 Environment Southland is accepted.

Amendments to District Plan

Reword Issue 3 to read:

There is a lack of public awareness of the risks of natural hazards and how they may affect specific sites or areas. Consequently, there is a lack of contingency planning for natural hazards and some development decisions appear to be ill-informed with respect to natural hazards.

Reasons

- 1. The submitter supports the issues, except Issue 3.
- 2. Unnecessary wording is removed.

2.11.2 Objectives

18.65 Environment Southland

The submitter generally supports the objectives. Retain.

78.5 Ministry of Education

Objective 1 is supported, on the basis that the submitter considers it (along with Policies 2 and 8) to be a sound management approach to encourage communities and subdivision to avoid hazard prone areas. Retain Objective 1.

Decision 15/10

These submissions are noted.

Amendments to District Plan

None required.

Reason

The submitters support the Plan provisions.

SUBMISSION

53.16 NZ Transport Agency

The submitter suggests that not all natural hazards can realistically be avoided. Amend Objective 1 as follows:

Actual or potential effects of natural hazards on people, communities and their businesses, property and infrastructure are understood and avoided_mitigated or reduced, resulting lengterm-in the Invercargill community becoming more resilient.

FS39.12 Environment Southland

The further submitter opposes Submission 53.16, agreeing that not all hazards "can realistically be avoided" but disagreeing with the proposed amendment to Objective 1. ES believes that the existing objective allows for avoidance and reduction.

FS6.1(a) Alliance Group Limited

The further submitter supports in part Submission 53.16 agreeing that the complete avoidance of natural hazards is not always practicable.

87.32 Transpower NZ Ltd

The submitter supports Objective 1 in part. The submitter notes that Transpower designs and constructs its infrastructure to be resilient to known natural hazards to the extent practical and feasible. The submitter also considers that the effects of natural hazards cannot technically be reduced in scale or impact and therefore the objective should be amended to refer to mitigating rather than reducing the effects of natural hazards.

<u>Decision Sought</u>: The submitter seeks the following change to Objective 1 together with any consequential amendments:

Actual or potential effects of natural hazards on people, communities and their businesses, property and infrastructure are understood and avoided or reduced mitigated, resulting long-term in the Invercargill community becoming more resilient.

FS5.23 Invercargill Airport Limited supports Submission 87.32, supporting the replacement of the term "reduced" with "mitigated" as it agrees that natural hazards cannot be reduced in scale, however considers that measures can be taken to avoid or mitigate their impact.

DECISION

Decision 15/11

Submissions 53.16 NZ Transport Agency and 87.32 Transpower NZ Ltd are accepted in part.

Amendments to District Plan

Amend Objective 1 to read:

Actual or potential effects of natural hazards on people, communities and their businesses, property and infrastructure are understood and avoided, <u>mitigated</u> or reduced, resulting long-term in the Invercargill community becoming more resilient.

Reasons

- Planning for hazards in the context of a District Plan can "mitigate" the effects of a hazard, but inevitably the benefits are "long term".
- The effect of natural hazards can sometimes be "reduced", for example, by taking potential flood risk into account when designing floor levels for a new building.
- 3. Objective 1 refers to "the actual or potential <u>effects</u> of natural hazards". The Council does not presume to be able to influence the magnitude of the hazard event itself.

SUBMISSION	DECISION
FS6.1(b) Alliance Group Limited supports in part Submission 87.32, agreeing that the complete avoidance of natural hazards is not always practicable.	
2.11.3 Policies	
18.66, 18.72 and 18.73 Environment Southland The submitter generally supports the policies, and specifically supports Policies 11 and 12. 88.3 Federated Farmers Policy 1. Support. 18.69 Environment Southland The submitter supports Policy 6 and seeks its retention. 78.5 Ministry of Education Policy 8 is supported, on the basis that the submitter considers it (along with Objective 1 and Policy 2) to be a sound management approach to encourage communities and subdivision to avoid hazard prone areas. Retain Policy 8.	Decision 15/12 These submissions are noted. Amendments to District Plan None required. Reason The submitters support the policies, and while minor alterations are made to some of them, that does not affect their overall intent.
The submitter supports the intent of the policies, but considers that many of the policies in this section of the Plan appear more as methods of implementation rather than District Plan policies. The submitter suggests that the section is reviewed to ensure that the policies are not worded as rules, and that they are worded to provide clear direction to decision makers on rules and to those implementing methods. Decision Sought: Rework the policies contained in Section 2.11.3 Policies to ensure that they provide the clear direction necessary for effective policy making. FS25.10 Transpower NZ Ltd opposes in part Submission 53.17. Transpower understands that there is uncertainty around the extent and level of risk from natural hazards. Transpower considers that this needs to be resolved to enable more definitive policies to be included in the Proposed Plan. Transpower also considers that the submission provides insufficient clarity as to the wording of these "reworked policies".	Decision 15/13 This submission is rejected. Amendments to District Plan None required. Reason While a number of policies focus on process and methodology, matters of principle are also dealt with in Policies 8 - 12. These give "the clear direction necessary for effective policy making" referred to by the submitter.

SUBMISSION

78.5 Ministry of Education

Policy 2 is supported, on the basis that the submitter considers it (along with Objective 1 and Policy 8) to be a sound management approach to encourage communities and subdivision to avoid hazard prone areas. Retain Policy 2.

65.30 ICC Environmental and Planning Services

Policy 2 - The submitter supports this policy in part, considering the explanation should be amended as it does not match the full intention of the policy. Apart from retreating from the hazard-prone properties there may be other options that make the organisations or communities more resilient to hazards.

Decision 15/14

DECISION

- Submission 78.5 Ministry of Education is noted.
- Submission 65.30 ICC Environmental and Planning Services is accepted.

Amendments to District Plan

Amend the Explanation to Policy 2 to read:

Use of hazard-prone properties is likely to become less sustainable as more frequent hazard events affect them and they become more difficult to insure. More frequent hazard events are likely to affect the use of properties in hazard-prone areas and make it more difficult to insure both buildings and their contents. Where it is possible and feasible to shift to less hazard-prone sites, this should be encouraged. Alternately, measures such as design features within the site or building itself may help mitigate the hazard.

Reasons

- 1. The Ministry of Education supports the policy.
- 2. An expanded explanation clarifies the policy.

88.4 Federated Farmers

Policy 3 - The submitter supports this Policy in part. The submitter supports improved identification and mapping of areas at risk from the effects of natural hazards, but only where this is done in liaison with landowners and where this is carried out based on genuine scientific research and need. The submitter believes that landowners have substantial knowledge of their property and how it responds to natural events and should be consulted on issues affecting their land before any decisions are made. The submitter considers that there remains a level of contention in relation to what natural hazards do hold a genuine risk to the district and that any determinations in this area must be objectively researched and only acted upon after evidence suggests a trend.

Decision Sought: Amend the policy as follows:

Policy 3 Identification: To identify areas at risk from the effects of natural hazard, <u>in consultation with landowners and after objective scientific research</u>

Decision 15/15

Submission 88.4 Federated Farmers is accepted in part.

Amendments to District Plan

Amend Policy 3 to read:

To identify areas at risk from the effects of natural hazards <u>using the most up to date and</u> reliable information available to Council

Reason

Identifying and mapping areas at risk from natural hazards should be done on the best information that is available or can be obtained and that includes consulting land owners and other stake-holders such as regional government and Crown research institutes.

SUBMISSION	DECISION
FS2.36 NZAS Ltd supports Submission 88.4, considering that any further identification of natural hazards should be based on "objective scientific research" and therefore supports the amendment sought.	
FS39.13 Environment Southland opposes Submission 88.4, believing that if any change is to be made to the policy, it should be changed to "To identify areas at risk from the effects of natural hazards <u>using the best information available.</u> " They comment that this may or may not involve landowners and will almost certainly use the latest credible research. They consider that while some owners have been on a property long enough to have a good understanding of one or more hazards that may affect their property, many don't as well. Furthermore, while property owners may understand what has happened in the past, they don't have a good understanding of the likelihood of the hazard in the future.	
The further submitter considers the District Plan should promote a precautionary approach and believes that every attempt has been made to incorporate the latest information. They consider that it is not practical at a district wide scale to consult with every landowner.	
18.67 Environment Southland Policy 3 - The submitter believes the second sentence of the Explanation needs to be altered to make it read better. Decision Sought: Add a comma between "public information" and "areas" in the second sentence of the explanation.	Decision 15/16 This submission is accepted. Amendments to District Plan Amend the Explanation to Policy 3 to read: While the Council's hazard information will always be incomplete, it is likely to be the best information available and assembled in any one location. Council uses this information to identify as public information, areas which it has cause to believe could be hazard-prone. Reason The change corrects a grammatical error.
	The change corrects a grammatical error.

SUBMISSION	DECISION
65.31 ICC Environmental and Planning Services The submitter supports Policy 4 in part. The submitter considers that the explanation could be developed to further explain that there are areas within the Invercargill city district that are potentially at risk from more than one hazard.	Decision 15/17 This submission is accepted in part. Amendments to District Plan Reword the Explanation to Policy 4 to read:
Decision Sought: Amend the explanation as follows: The geography of the Invercargill city district is such that where an area is potentially at risk from one hazard, it is also susceptible to a range of other hazards. Generally those areas below three metre	Explanation – The geography of the Invercargill City District is such that where an area is potentially at risk from one hazard, it is often also susceptible to a range of other hazards. Generally, those aAreas of land below three metres above mean sea level are most at risk from sea level rise, are also affected or potentially affected by riverine inundation, liquefaction, storm surge, and tsunami.
FS5.24 Invercargill Airport Limited opposes Submission 65.31, considering that a broad statement of this effect needs to be supported by sound scientific evidence prior to its inclusion in the Proposed Plan. FS39.14 Environment Southland supports Submission 65.31, commenting that low areas and floodplains are generally more susceptible to liquefaction and ground shaking as well as the more obvious hazards of marine and riverine inundation.	Reason Research compiled in the preparation of the proposed Plan shows that the lower-lying areas of Invercargill are subject to one or more natural hazards.
18.68 Environment Southland Policy 5 The submitter notes that "Mercalli" is spelt incorrectly (as "Merceli').	Decision 15/18 This submission is accepted. Amendments to District Plan Replace the word "Merceli" with "Mercalli" in Section 2.11 Policy 5 and its explanation. Reason The amendment corrects a spelling error.
117.11 Southern District Health Board Policy 5 (and 7) - The submitter recommends that consideration be given to advising dwelling owners that their property is in an area three metres or five metres AMSL.	Decision 15/19 This submission is noted. Amendments to District Plan None required. Reason This information will be shown on the District Hazard Information Maps and advised to those persons who request a PIM or LIM for affected

SUBMISSION	DECISION	
	properties.	
18.70 Environment Southland The submitter supports Policy 7, but suggests that the five metres above mean	Decision 15/20 This submission is accepted in part.	
sea level contour should be shown in the District Plan maps, either on the Hazard Maps or a completely separate map, to make the policy more meaningful. Decision Sought: Include five metre contour information in the District Plan.	Amendments to District Plan Show the five metre contour for the urban areas of the Invercargill City District in the District Hazard Information Maps, as shown in Appendix 3 of this decision.	
	Reason There is insufficient certainty to show the five metre contour at the scale used for the District Hazard Information Maps over the Invercargill City District, but sufficient data is available to map that contour for the urban areas.	
18.71 Environment Southland The submitter supports Policy 8, but suggests there will be debate around	Decision 15/21 This submission is accepted.	
what constitutes "exacerbate significantly".	Amendments to District Plan Reword Policy 8 to read:	
	To avoid subdivision in hazard-prone areas where this would lead to intensification of development that would exacerbate significantly the consequence of a hazard event.	
	Reason The word "significantly" introduces uncertainty and is not required.	
2.11.4 Methods of Implementation		
87.33 Transpower NZ Ltd Methods of Implementation (A) – (D) - The submitter supports these methods in part but seeks assurance that technical and economic matters will be taken into a project of the control of the c	Decision 15/22 This submission is accepted in part. Amendments to District Plan	
into consideration and suggests that Method of Implementation (B) is amended to refer to "inappropriate" activity, thereby recognising that some activities such as National Grid towers may need to locate in areas at risk from	Amend Method D(i) (now renumbered Method 4(A)) to read: (i) Promoting long-term strategic withdrawal of key infrastructure and services from	

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natural hazards.	hazard-prone areas where this is <u>technically</u> viable.
<u>Decision Sought</u> : Amend Method of Implementation as follows:	Reasons 1. The word "inappropriate" in the context of Method (B) would introduce uncertainty.
2.11.4 Methods of Implementation	2. As worded, Method (B) does not prevent activities that have a
(B) Rules limiting subdivision and <u>inappropriate</u> activity in areas subject to risk from natural hazard.	functional need from locating in a hazard prone area, but highlights that consent is required. The proposed Plan then recognises at a
(D) Initiating environmental advocacy for:	policy level the concept of functional need. The submitter is therefore not disadvantaged by the wording of Method (B).
(i) Promoting long-term strategic withdrawal of key infrastructure and services from hazard-prone areas where this is technically and economically viable.	3. Including reference to "where it is technically viable" in Method (D) (now Method 4) provides a check of realism. As the Council should
(ii) Encouraging assessment of natural hazard and response to that hazard to be an integral part of all project planning."	be able to initiate advocacy without the requirement that a proposal be "economically viable" inclusion of these words is not justified.
And any consequential amendments.	4. Transpower advised of its acceptance of this decision having
FS5.25 Invercargill Airport Limited supports Submission 87.33, adding that historical circumstances and subsequent investment have also led to some infrastructure locating on at risk areas. Relocating such infrastructure would not be economically viable.	regard to the reasons set out above, and in the Section 42A Report.
FS6.2 Alliance Group Limited supports Submission 87.33, agreeing that there should be recognition of technological and economic constraints when determining appropriateness of an activity within areas subject to risk from natural hazards.	
FS7.31 South Port New Zealand Ltd supports Submission 87.33.	
18.74 Environment Southland	Decision 15/23
The submitter supports Method (C), which is to require hazard assessment and mitigation to be addressed in relation to any development requiring	This submission is accepted in part.
resource consent and affected or potentially affected by natural hazards identified by the Council. The submitter suggests the assessment required	Amendments to District Plan Amend Section 2.11.3 Policy 10 to read:
should extend to consideration of stormwater flooding.	To adopt as an assessment criterion the degree to which natural hazard has been understood and addressed, in relation to any resource consent for any development on

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	land affected by one or more natural hazards including stormwater flooding.
	Reason Stormwater flooding can be an issue in Invercargill and it can be exacerbated by development which increases or changes runoff and it is appropriate to recognise that at a policy level. However, it would be out of context to specifically mention stormwater flooding in the Methods section.
2.14 Subdivision	
18.103 Environment Southland 3.18.7 - Support.	Decision 15/24 This submission is noted.
	Amendments to District Plan None required.
	Reason The submitter supports the provision and seeks no change to it.
77.41 Te Runaka o Waihopai and Te Runaka o Awarua Policy 6 Natural Hazards - Explanation - Seeks retention of this section.	Decision 15/25 1. Submission 77.41 Te Runaka o Waihopai and Te Runaka o
65.36 ICC Environmental and Planning Services Policy 6 Natural Hazards - Explanation - The submitter considers that natural hazards should be considered at both the subdivision and land use stages. The explanation infers that they should only be considered at the time of subdivision. Decision Sought: Amend Policy 6: Natural hazards are a constraint that should be considered at both the subdivision stage and, rather than at the building stage.	Awarua is noted. 2. Submission 65.36 ICC Environmental and Planning Services is accepted in part. Amendments to District Plan Amend the Explanation to Policy 6 to read:
	Natural hazards are a constraint which that should be identified and considered primarily
	at the subdivision stage rather than that as well as the <u>land use consent</u> and building <u>consent</u> stages. It is considered appropriate to forewarn prospective purchasers through
Natural hazards are a constraint that should be considered at the subdivision stage, rather than at as well as at the building stage.	notice on the title at the subdivision stage, rather than being left to the point in time when buildings <u>or changes in land use</u> are proposed.
FS39.16 Environment Southland support in part Submission 65.36. The further submitter agrees that natural hazards should be considered at the	Reasons 1. Te Runaka o Waihopai and Te Runaka o Awarua support the

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subdivision, land use and building consent stages, but in the first instance at the subdivision or land use stages which, if required, would precede the building consent stage.	provision. 2. Rewording clarifies the intent of the explanation.
Consider the following alternatives also:	
Natural hazards are a constraint that should be considered at the subdivision, <u>land use</u> and building consent stages.	
or the following (which is preferred)	
Natural hazards are a constraint that should be considered <u>primarily</u> at the subdivision stage as well as the <u>land use</u> and building consent stages.	
SECTION 3.12 NATURAL HAZARD RULES	
88.84 Federated Farmers The submitter supports Rules 3.12.1 and 3.12.2, suggesting there needs to be an acknowledgement that people knowingly move into such areas and take on the risks and benefits associated with this choice.	Decision 15/26 This submission is noted.
	Amendments to District Plan None required.
	Reasons 1. The submitter supports the rules.
	2. There is no legal mechanism whereby people can be required to acknowledge that they are knowingly moving into an area subject to a natural hazard.
	3. Showing information on the District Hazard Information Maps, considering the risks from hazards in assessing resource consents, and providing information on hazards when PIMs and LIMs are sought is as far as the Council can go.
18.96 Environment Southland	Decision 15/27
Rule 3.12.2 - The submitter suggests that in respect of the coastline, "within" could be replaced with "adjacent to" or "near" as one can't be "within" a	This submission is accepted.
coastline prone to erosion, but then the question of "how near" arises. The	Amendments to District Plan

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submitter believes the City Council needs to either establish a coastal erosion hazard overlay or specify a distance from the eroding coast.

<u>Decision Sought</u>: Amend the wording of the rule in respect of proximity to a coastline mapped on the Hazard Maps as eroding.

FS2.37 NZAS Ltd does not oppose the provision of coastal erosion hazard overlay in principle, however they are unsure whether the proposed extension to the coastal erosion line will have any implications on the operations of the smelter. NZAS opposes the extension of the coastal erosion line to the extent that it may affect the operation of the smelter.

18.97 Environment Southland

Rule 3.12.3 (A) - The submitter suggests that the Rule should make it clear that it does not apply to earthworks undertaken to clear sand from roads or streams to facilitate access or drainage.

18.98 Environment Southland

3.12.3(B) - The submitter believes the rule should be amended to enable Environment Southland or the Invercargill City Council to undertake earthworks or erect structures on stopbanks. The addition of the words "unless authorised by the asset management authority for the stopbanks" is requested.

67.2 ICC Drainage Manager

3.12.3(B) - The submitter considers that work within stopbanks should be allowed if done with the approval and to the specification of the authority responsible for management of the stopbank. The Drainage Manager asks that Rule 3.12.3(B) is amended to provide for excavation and construction within stopbanks to be allowed with the written approval, and to the required standards, of the responsible Asset Management authority.

DECISION

Amend Rule 3.12.2 to read:

Sea level rise, coastal erosion and storm surge: This rule applies only to the erection of new residences and extensions to existing residences in those areas identified on the District Hazard Information Maps as being within the area identified as being Most at Risk from Sea Level Rise/Storm Surge Event and those areas less than 50 metres inland from MHWS along any Coastline Most Prone to Erosion.

Reasons

- 1. For clarity an addition is required to the rule.
- Given the rules only applies to residences there is no adverse effect on the Tiwai smelter.

Decision 15/28

This submission is accepted.

Amendments to District Plan

- (a) Amend Rule 3.12.3(A) to read:
 - (B) Except as provided for in Rule 3.12.4, aAny land on the seaward side of the line on the <u>District</u> Hazard <u>Information</u> Maps identifying the inland extent of the coastal sand dunes.
- (b) Amend Rule 3.12.3(B) to read:
 - (B) Except as provided for in Rule 3.12.4, aAny stopbanks identified on the Hazard Maps.
- (c) Insert a new Rule 3.12.4 as follows:
 - 3.12.4 It is a permitted activity for an asset management authority to undertake earthworks to:
 - (A) clear and/or remove sand and other material from any formed public road.
 - (B) enable access along the margins of any waterway
 - C) facilitate drainage of any natural or artificial waterway,

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	including any piped or unpiped stream or drain. (D) undertake improvements, repairs and maintenance of stopbanks identified on the District Hazard Information Maps. (D) Insert a new definition as follows: Asset Management Authority means any regional council, territorial authority or designating authority or their authorised agents in relation to works or assets for which it has financial responsibility. Reason To avoid unnecessary procedures it is appropriate to enable authorities with financial responsibility for roads, stopbanks and waterways to undertaken necessary works without the need to obtain resource consent approval.
APPENDICES	
18.105 Environment Southland Appendix 1 2(g) - The submitter suggests adding an introductory statement "Whether or not the site is mapped as being within or adjacent to a hazard overlay". The submitter believes applicants or their representatives are overly reliant on the hazard overlays, especially the flood overlay, to indicate the actual or potential existence of hazards, but the flood hazard overlay does not map all areas subject to actual or potential inundation.	Decision 15/29 This submission is accepted. Amendments to District Plan Amend part 2(g) of Appendix 1 to read: (g) Whether or not the site is shown on the District Hazard Information Maps as being within or adjacent to a hazard overlay, a description of any natural hazards affecting the land, together with an assessment of how the proposal will affect, or be affected by any hazard, and any measures proposed to avoid, remedy or mitigate or reduce those effects and the effects of those measures and where necessary the required hazard assessment form completed by a suitably qualified expert and signed as accepted by the applicant. Reason It is appropriate to consider hazards whether they are shown on the Hazards Maps or not.

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65.123 ICC Environmental and Planning Services Appendix 3 - Support subject to amendment. The submitter notes that Section 219 of the RMA has been repealed and therefore should be removed from the provision of the Plan.	Decision 15/30 This submission is accepted. Amendments to District Plan Amend part 3 of Appendix 1 to read: For any applications to subdivide land, the following information requirements may apply (in addition to that required by Section 219 of the Resource Management Act). Reason The deletion corrects an error in the text.
18.106 Environment Southland 3(d)(vi) - The submitter suggests that the locations of watercourses should be required to be shown on applications because they are relevant to natural hazard, public access and protection of waterways from stock provisions of the Plan. Decision Sought: Amend the provision to read: Topographical features including watercourses, buildings, fences and hedges	Decision 15/31 This submission is accepted. Amendments to District Plan Amend part 3(d)(vi) of Appendix 1 to read: (vi) Topographical features including <u>watercourses</u> , buildings, fences and hedges, and also contours and spot heights to show the general fall of the land and appropriate grade of roads or access. Reason The locations of watercourses should be shown on applications because they are relevant to natural hazard, public access and protection of waterways from stock.
18.107 Environment Southland 3(d)(viii) - The submitter suggests the provision should be consistent with 2(g) of Appendix I. The submitter also suggests that the consideration of hazards, in particular the flood hazard, should not be limited to areas identified on the hazard information maps. Decision Sought: Amend the provision to read: Whether or not the site is mapped as being within or adjacent to a hazard overlay, an assessment of how the proposal will affect or be affected by any hazard, and any measures proposed to avoid, remedy or mitigate these effects and the effects of those measures and where necessary the required hazard assessment form completed by a suitably qualified expert and signed as accepted by the applicant.	Decision 15/32 This submission is accepted. Amendments to District Plan Amend part 3(d)(viii) of Appendix 1 to read: (viii) Areas identified on the Hazard Information Maps as being subject to a natural hazard and An assessment of how the proposal will affect or be affected by any natural hazard, and any measures proposed to avoid, remedy or mitigate or reduce these effects. Reason Amendments are required for consistency with other Plan provisions.

DECISION	
MAPS	
Decision 15/33 This submission is accepted.	
Amendments to District Plan On the Hazard Information Map legend show the coastline most prone to erosion as a pink line.	
Reason The symbol shown on the District Hazard Information Maps was incorrect.	
Decision 15/34 This submission is accepted.	
Amendments to District Plan Amend the relevant notation on the fold-out Hazard Information Map Legend to read:	
Coastline Most Prone to Erosion	
Reason The amendment better expresses what is shown on the District Hazard Information Maps.	
Decision 15/35 This submission is accepted.	
Amendments to District Plan Extend the line showing coastline most prone to erosion to that shown on the maps attached as Appendix 3.	
Reason The additions made correct an omission when the Proposed Plan was prepared.	

SUBMISSION	DECISION	
VARIATION 1		
V1.1 A M Iverson Support in part. The submitter supports the Variation on the grounds that new businesses/residences need to be elevated for building level from ground on a case by case basis. However, the submitter considers that existing dwellings should have a choice if they were renovating/rebuilding on the same section to build to the new level or stay with what was existing. Decision Sought: Amend the activity status to discretionary which, in the submitter's opinion, will require a resource consent on a case by case basis, rather than a broad approach to all to accommodate the needs of businesses and residents.	 Decision 15/36 This submission is rejected. Amendments to District Plan None required. Reasons Residential developments below the stipulated floor levels in the Level 2 and 2A risk areas will be assessed on a case-by-case basis as promoted in the Variation. The non-complying activity status is preferable to discretionary activity status on the grounds that it is more consistent with the Objectives and Policies of the Proposed District Plan and provides resource users and the wider community greater surety about the importance of avoiding adverse effects of natural hazards. 	
V2.1 Environment Southland Support 3.12.1(A)(c). The submitter believes this will support the Proposed Regional Policy Statement (PRPS) Natural Hazards chapter objectives and policies which focus on building a more resilient community that has greater awareness and understanding of the risks of natural hazards. The PRPS provisions also seek to reduce exposure to adverse effects arising from natural hazards.	Decision 15/37 This submission is noted. Amendments to District Plan None required. Reason The submitter supports the variation and seeks no change to it.	

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SECTION 2 ISSUES, OBJECTIVES AND POLICIES

2.11 Natural Hazards

The Invercargill City¹ District is located at about latitude 46.5° South, at the southern end of the South Island. Its location

- (A) In terms of latitude and the consequent climatic conditions
- (B) At the mouth of the Oreti and Waihopai Rivers
- (C) Adjacent to Foveaux Strait
- (D) On a flood plain
- (E) Within the area likely to be influenced by an event on the Alpine Fault

results in the City District being susceptible to natural hazards.

The majority A significant part² of the District is located on modified flood plains which historically have experienced periodic inundation and watercourse change.

Sea level rise/storm surge has been identified as a natural hazard in respect of land adjoining the open sea coast, Bluff Harbour, the New River Estuary and tidal tributaries. The areas below three metres above mean sea level are most at risk from storm surge and sea level rise over the next 100 years or so. The areas below three metres above mean sea level adjoining the New River Estuary and the tidal tributaries have been mapped and are shown on the District Hazard Information Maps.³

The District, like the rest of New Zealand, is susceptible to seismic activity. A major rupture of the Alpine Fault is understood to have a 6—14% probability occurrence within the next 20 years—30% chance in the next 50 years. The District is also at risk of earthquakes in the Puysegur Subduction zone to the south-west of the South Island. The best information available to the Council indicates that a Modified Mercalli VIII earthquake is the 475 year return period earthquake event allowing for the risk of amplified ground shaking due to the nature of the underlying soils. The lower lying areas of the Invercargill District have a high, or very high, susceptibility to liquefaction.

The lower lying areas have varying degrees of susceptibility to tsunami risk. A tsunami affecting these areas would most likely be generated by a seismic event anywhere around the Pacific Basin, or by an event originating in the Puysegur Subduction zone.

Land use activities are subject to such phenomena as inundation, seismic activity, coastal erosion, and sea level rise/storm surge.

¹ Minor amendment made under Clause 16(2) of the RMA First Schedule

² Decision 15/6

³ Decision 15/7

⁴ Decision 15/8

2.11.1 Issues

The significant resource management issues for natural hazards:

- 1. Areas which are hazard-prone tend to be subject to more than one hazard.
- 2. Climate change will affect the intensity, frequency and risk of some natural hazard events, particularly:
 - (a) Sea level rise, exacerbating the effects of coastal erosion and inundation and river flooding in low lying areas, especially during storm events;
 - (b) Increased frequency and intensity of storm events, adding to the risk from floods, storm surge, coastal erosion and inundation:
 - (c) Increased frequency of drought, placing pressure on water resources and increasing the wild fire risk.
- 3. There is a lack of public awareness of the risks of natural hazards and how they may affect specific sites or areas. Consequently, there is a lack of contingency planning for natural hazards and some development decisions appear to be ill-informed with respect to natural hazards.⁵
- 4. The impacts of natural hazards on individuals, communities, and businesses and the effects of natural hazards on infrastructure are always present and likely to increase if the Invercargill District experiences more extreme weather conditions and sea level rise as predicted.
- 5. There is pressure for development in areas prone to natural hazards.

2.11.2 Objectives

Objective 1: Actual or potential effects of natural hazards on people, communities and their businesses, property and infrastructure are understood and avoided, <u>mitigated</u> or reduced, resulting long-term in the Invercargill community becoming more resilient.

Objective 2: The exposure of the Invercargill City District to adverse effects arising from natural hazard is reduced over time.

2.11.3 Policies

Policy 1 Awareness and Understanding: To raise awareness and promote understanding of the nature of natural hazards likely to affect the Invercargill City District, and their risks and possible effects on buildings and activities.

Explanation: Increasing awareness of the natural hazardscape of Invercargill is the best way to enable people to take precautions against natural hazards in the way that they manage existing properties and plan new developments. Knowledge can help prevent a hazard being either ignored or over-stated.

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⁵ Decision 15/9

⁶ Decision 15/11

Policy 2 Reduced exposure: To encourage organisations and communities to reduce their exposure to natural hazard.

Explanation: Use of hazard-prone properties is likely to become less sustainable as more frequent hazard events affect them and they become more difficult to insure. More frequent hazard events are likely to affect the use of properties in hazard-prone areas and make it more difficult to insure both buildings and their contents. Where it is possible and feasible to shift to less hazard-prone sites, this should be encouraged. Alternately, measures such as design features within the site or building itself may help mitigate the hazard.

Policy 3 Identification: To identify areas at risk from the effects of natural hazards <u>using</u> the most up to date and reliable information available to Council. 8

Explanation: While the Council's hazard information will always be incomplete, it is likely to be the best information available and assembled in any one location. Council uses this information to identify as public information, ⁹ areas which it has cause to believe could be hazard-prone.

Policy 4 Identification - Multiple hazards: To identify areas below the three metre contour (AMSL) using the best information available to the Council, and delineate these areas on the <u>District Hazard Information</u> Planning 10 Maps as hazard prone.

Explanation: – The geography of the Invercargill City District is such that where an area is potentially at risk from one hazard, it is often also susceptible to a range of other hazards. Generally, those aAreas of land below three metres above mean sea level are most at risk from sea level rise, are also affected or potentially affected by riverine inundation, <u>liquefaction</u>, storm surge, and tsunami.

Policy 5 Identification - Earthquake:

- (A) To identify the Modified Mercelli Mercalli 12 VIII earthquake as the 475 year return period event, around which hazard planning for earthquake should be based.
- (B) To also identify areas at risk from liquefaction.

Explanation: The best information available to the Council indicates that the biggest earthquake risk to Invercargill is from an earthquake originating in Fiordland and that the shaking felt in Invercargill from a 475 year return period event is likely to be of Modified Mercelli-Mercalli¹¹ VIII. Generally, the lower lying areas of Invercargill are known to be at significantly greater risk from liquefaction than the areas above the three metre contour.

⁷ Decision 15/14

⁸ Decision 15/15

⁹ Decision 15/16

 $^{^{10}\}mathrm{Minor}$ amendment under Clause 16(2) of the RMA First Schedule

¹¹ Decision 15/17

¹² Decision 15/18

- **Policy 6 Identification Riverine inundation:** To identify risk from riverine inundation as follows:
 - (A) Level 1: (Low risk as a result of flood protection mitigation measures.)
 - (B) Level 2: (High risk, and includes those areas where future flood levels can be predicted.)
 - (C) Level 2A: (High risk in the event of a flood greater than the design limits of the flood protection system.)
 - (D) Level 3: (High risk, unprotected, and including areas designed to pond in a flood event, and active floodplains.)

and to:

- (E) Discourage intensification of land use on areas classed as having a Level 1 risk, and
- (F) Limit development on areas classed as having a 2, 2A or 3 level of risk.

Explanation: Even if an area is believed to have a low level of risk at present, this can change as understanding improves. If development intensifies, the consequences of flood events are worse than if development intensity had been controlled.

Building development should be discouraged on areas at high risk from inundation. Even if floor levels and building platforms can mitigate the risk for individual dwellings, infrastructure is affected in any flood event, as is the efficacy of on-site effluent systems. The more people that live in such areas, the harder it is to manage an emergency event.

Policy 7 Identification - Sea level rise: To recognise areas below the five metre contour (AMSL) as having the potential to be affected by sea level rise, and to identify areas below the three metre contour (AMSL) as being most at risk from sea level rise.

Explanation: Throughout New Zealand local authorities are being warned to plan proactively for sea level rise and its consequences, and these contours form the basis of the advice from Central Government.

Policy 8 Subdivision: To avoid subdivision in hazard-prone areas where this would lead to intensification of development that would exacerbate significantly 13 the consequence of a hazard event.

Explanation: Subdivision sets the pattern of future land use and has an effect on land development potentially lasting hundreds of years. Controls on subdivision will help prevent intensification of development in hazard-prone areas.

Policy 9 Protection: To protect areas or features which offer protection against the effects of natural hazards.

¹³ Decision 15/21

Explanation: Some natural features, such as the sand dunes at Oreti Beach, are nature's line of defence against extraordinary climatic or other hazard events and need to be protected. There are also man-made structures such as flood protection works that need to be protected.

Policy 10 Assessment criterion: To adopt as an assessment criterion the degree to which natural hazard has been understood and addressed, in relation to any resource consent for any development on land affected by one or more natural hazards including stormwater flooding. ¹⁴

Explanation: The susceptibility of a site to natural hazard can be a prime determinant of the suitability of that site to the proposed use. In many cases natural hazard can be avoided or mitigated in the design of proposed structures or buildings.

Policy 11 Precautionary Approach: To take a precautionary approach to managing the effects of natural hazard.

Explanation: Our understanding of the natural hazardscape is changing all the time. Further, the current indications are that climate change will result in more, and more extreme, weather events even if average changes are small.

Policy 12 Collaboration: To seek advice on an ongoing basis from Environment Southland and relevant government agencies relating to the hazardscape of Invercargill.

Explanation: Both Environment Southland and the Invercargill City Council need to work closely, and with congruent policies, to ensure that the wise development of the Invercargill City District has appropriate regard to the hazardscape of the City District. Government agencies such as NIWA have a lead role with provision of information in the sciences of natural hazard and climate change.

2.11.4 Methods of Implementation

- Method 1¹⁵: (A) Delineation of areas indicating areas subject to risk from natural hazard on the District Hazard Information Planning Maps
- <u>Method 2:</u> (B) Rules limiting subdivision and <u>certain activities</u> activity in areas subject to risk from natural hazard,
- Method 3: (C)Requiring hazard assessment and mitigation to be addressed in relation to any development requiring resource consent and affected or potentially affected by natural hazards identified by the Council.
- Method 4: (D) Initiating environmental advocacy for
 - (A) Promoting long-term strategic withdrawal of key infrastructure from hazard-prone areas where this is <u>technically</u> viable

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¹⁴ Decision 15/23

¹⁵ Renumbering of Methods as per Decision 15/5

¹⁶ Decision 15/22

(B) Encouraging assessment of natural hazard and response to that hazard to be an integral part of all project planning

<u>Method 5:</u> (E) Dissemination of information:

- (A) Preparing and disseminating information describing the natural hazard environment of <u>the Invercargill City District</u> to inform public and private sector decision-making.
- (B) Issuing hazard information to the best of the Council's knowledge as part of the LIM and PIM processes.

Method 6: (F)—Collaboration and information sharing with other local authorities and government agencies in order to obtain and share the best and most up to date information on natural hazards.¹⁷

2.14 Subdivision

Policy 6 Natural Hazards: To restrict subdivision in hazard-prone areas and ensure that each new allotment contains a hazard free building site, particularly where new buildings and structures are likely to be constructed.

Explanation: Natural hazards are a constraint which that should be identified and considered primarily at the subdivision stage rather than at as well as the land use consent and building consent stages. It is considered appropriate to forewarn prospective purchasers through notice on the title at the subdivision stage, rather than being left to the point in time when buildings or changes in land use are proposed. ¹⁸

SECTION 3 RULES

3.12 Natural Hazards

- **Riverine inundation Dwellings:** This rule applies only to the erection of new residences and extensions to existing residences in those areas identified on the Hazard Information Maps as having either Level 2, or 2A or 3 risk from riverine inundation.
 - (A) Within those areas identified on the Hazard Information Maps <u>as</u> having either a minimum floor level:
 - (a) Any extension to a residence existing as at 30 July 2013 29 October 2016 is a permitted activity to a maximum of 50 square metres above the size that existed as at 30 July 2013 29 October 2016¹⁹.

¹⁸ Decision 15/25

¹⁷ Decision 15/15

¹⁹ Minor amendment made under Clause 16(2) of the RMA First Schedule

(b) The erection of new residences and extensions greater than 50 square metres to residences existing as at 30 July 2013 29 October 2016²⁰ is a restricted discretionary activity, provided that there is compliance with the minimum floor level specified on the Hazard Information Maps.

The matters over which the Council shall exercise its discretion are:

- (1) The siting of the building.
- (2) The length of time the building is to be on the site.
- (3) The extent to which the proposed development intensifies land use in a hazard prone area.
- (c) Except as provided for in paragraphs 3.12.1(A)(a) and 3.12.1(A)(b) the erection of any new residence, or any extension to the footprint of a residence, is a non-complying activity. 22
- (B) Within those areas identified on the Hazard Information Maps as having a Level 3 degree of risk of riverine inundation but excluding those areas with a minimum floor level:
 - (a) Any extension to the footprint of²³ a residence existing as 30 July 2013-29 October 2016 is a restricted discretionary activity to a maximum of 50 square metres above the size that existed as at 30 July 2013-29 October 2016²⁴.

The matters over which the Council shall exercise its discretion are:

- (1) The siting of the building.
- (2) The length of time the building is to be on the site.
- (3) The extent to which the proposed development intensifies land use in a hazard prone area.
- (b) Except as provided for in Rule 3.12.1(B)(a) above, the erection of any residence, or any extension to the footprint of 25 a residence, is a non-complying activity.
- (C) For the purposes of Rule 3.12.1, "residences" excludes attached carports, garages, laundries and non-habitable accessory buildings.

²⁰ Minor amendment made under Clause 16(2) of the RMA First Schedule

²¹ Minor amendment made under Clause 16(2) of the RMA First Schedule

²² Rule 3.12.1(A)(c) was inserted by Variation No. 1

²³ Minor amendment made under Clause 16(2) of the RMA First Schedule

²⁴ Minor amendment made under Clause 16(2) of the RMA First Schedule

²⁵ Minor amendment made under Clause 16(2) of the RMA First Schedule

- **3.12.2 Sea level rise, coastal erosion and storm surge:** This rule applies only to the erection of new residences and extensions to existing residences in those areas identified on the <u>District</u> Hazard <u>Information</u> Maps as being within the area identified as being Most at Risk from Sea Level Rise/Storm Surge Event and those areas less than 50 metres inland from MHWS along any Coastline Most Prone to Erosion. ²⁶ coastline prone to erosion.
 - (A) Any extension to a residence existing as 30 July 2013 29 October 2016²⁷ is a permitted activity to a maximum of 50 square metres.
 - (B) The erection of new residences and extensions greater than 50 square metres to residences existing as at 30 July 2013-29 October 2016²⁸ is a restricted discretionary activity.

The matters over which the Council shall exercise its discretion are:

- (a) The siting of the building.
- (b) The proposed floor levels of the building.
- (c) The length of time the building is to be on the site.
- (d) The extent to which the proposed development intensifies land use in a hazard prone area.
- (e) The degree of risk.
- (C) For the purposes of Rule 3.12.2 "residences" excludes attached carports, garages, laundries and non-habitable accessory buildings.
- **3.12.3**²⁹ It is a non-complying activity to undertake any earthworks and/or erect any structures in the following areas:
 - (A) Except as provided for in Rule 3.12.4, aAny land on the seaward side of the line on the District Hazard Information Maps identifying the inland extent of the coastal sand dunes.
 - (B) <u>Except as provided for in Rule 3.12.4, a</u>Any stopbanks identified on the <u>District</u> Hazard <u>Information</u> Maps.
- 3.12.4³⁰ It is a permitted activity for an asset management authority to undertake earthworks to:
 - (A) Clear and/or remove sand and other material from any formed public road.
 - (B) Enable access along the margins of any waterway.
 - (C) Facilitate drainage of any natural or artificial waterway, including any piped or unpiped stream or drain.

²⁷ Minor amendment made under Clause 16(2) of the RMA First Schedule

²⁶ Decision 15/27

²⁸ Minor amendment made under Clause 16(2) of the RMA First Schedule

²⁹ Decision 15/28

³⁰ Decision 15/28

(D) Undertake improvements, repairs and maintenance of stopbanks identified on the District Hazard Information Maps.

SECTION 4 DEFINITIONS

³¹ <u>Asset Management Authority means any regional council, territorial authority or designating authority or their authorised agents in relation to works or assets for which it has financial responsibility.</u>

SECTION 5 APPENDICES

APPENDIX 1

2. INFORMATION TO ACCOMPANY LAND USE RESOURCE CONSENT APPLICATIONS

(g) 32 Whether or not the site is shown on the District Hazard Information Maps as being within or adjacent to a hazard overlay, a A description of any natural hazards affecting the land, together with an assessment of how the proposal will affect, or be affected by any hazard, and any measures proposed to avoid, remedy or mitigate or reduce those effects and the effects of those measures and where necessary the required hazard assessment form completed by a suitably qualified expert and signed as accepted by the applicant.

3. INFORMATION TO ACCOMPANY SUBDIVISION CONSENT APPLICATIONS

For any applications to subdivide land, the following information requirements may apply (in addition to that required by Section 219 of the Resource Management Act).

- (d) Two copies of the subdivision report and two full scale copies of the plan along with a good quality A4 reduction shall be supplied. The two copies of the plan drawn accurately to a suitable scale shall show
 - (vi) Topographical features including <u>watercourses</u>, ³⁴ buildings, fences and hedges, and also contours and spot heights to show the general fall of the land and appropriate grade of roads or access.
 - (viii) Areas identified on the Hazard Information Maps as being subject to a natural hazard and aAn assessment of how the proposal will affect or be affected by any natural hazard, and any measures proposed to avoid, remedy or mitigate or reduce these effects. 35

³² Decision 15/29

³¹ Decision 15/28

³³ Decision 15/30

³⁴ Decision 15/31

³⁵ Decision 15/32

PLANNING MAPS

- 1. The Hazard Information Map legend to show coastline most prone to erosion as a pink line.36
- The relevant notation on the fold-out Hazard Information Map Legend to read 2. Coastline Most Prone to Erosion. 37
- Additional text to be added after the bullet points listed under "Riverine Inundation" 3. on the page entitled "Explanation of Hazard Data" toward the end of the District Planning Maps as follows:

Minimum floor levels annotated on the maps are expressed in relation to City Datum.¹

- 4. The line showing coastline most prone to erosion be extended as shown on District Hazard Information Maps 4, 14, 15, 21, 31, 32 and 33. 38
- 5. The five metre contour information be included for the urban areas of the Invercargill City District in the District Hazard Information Maps. 39

37 Decision 15/34

³⁶ Decision 15/33

³⁸ Decision 15/35

³⁹ Decision 15/20