

## 15. Natural Hazards

| Submission No. and Point / Submitter Name           | Plan Provision    | Summary of Submission  | Decision Requested   |
|---|-------------------|--|--|
|   | <b>General</b>    |  |  |
| <b>2.4 Bluff Community Board</b>                    | General           | 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.      | Not stated. It is considered the submitter requests the following:<br>The NZAS disaster modelling report and the latest Civil Defence information are incorporated into the District Plan. |
| <b>56.14 Jenny Campbell</b>                         | General           | 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.         | Not stated.  |
| <b>64.33 Department of Conservation</b>             | General           | Support. The submitter is particularly supportive of the provisions regarding the coastal environment as it considers they are consistent with Part 2 and s106 of the RMA and gives effect to the NZCPS 2010   | Retain objectives, policies, methods and rules   |
| <b>116.3 Kylie Fowler</b>                           | General - tsunami | 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. | Consideration of tsunami risk in Bluff, with long-term phase-out for some activities in hazard risk areas  |
| <b>117.10 Southern District Health Board</b>        | General           | 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.                       | Reformat the Methods of Implementation section to be consistent with the other sections of the Proposed District Plan  |
| <b>SECTION 2.11 ISSUES, OBJECTIVES AND POLICIES</b> |                   |  |  |
|   | <b>General</b>    |  |  |
| <b>18.60 Environment Southland</b>                  | Introduction      | The third paragraph of the Introduction 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”   | Replace the words “The majority” with “A significant part”   |

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| 18.61<br>Environment<br>Southland         | Introduction                       | 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.                                   | Amend the first sentence of the fourth paragraph to read:<br><br>“Sea level rise/storm surge has been identified as a natural hazard in respect of land adjoining the New River Estuary and tidal tributaries.”   |
| 18.62<br>Environment<br>Southland         | Introduction                       | 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).<br><br>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 | Amend the fifth paragraph to read as follows:<br><br>“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 <u>30% chance in the next 50 years.</u> The district is also at risk of earthquakes in the <u>Puysegur Subduction zone to the southwest of the South Island.</u> The best information available to the Council indicates that a <u>Modified Mercalli VIII</u> earthquake is the 475 year return period earthquake event <sup>7</sup> <u>allowing for the risk of amplified ground shaking due to the nature of the underlying soils.</u> The lower lying areas of the Invercargill district have a high, or very high susceptibility to liquefaction. |
| 78.5 Ministry of<br>Education             | Objective 1, Policy 2 and Policy 8 | Support on the grounds that eh submitter considers it to be a sound management approach to encourage communities and subdivision to avoid hazard prone areas.   | Retain Objective 1, Policy 2 and Policy 8   |
|   | <b>2.11.1 Issues</b>               |   |   |
| 18.63<br>Environment<br>Southland         | Issues                             | Support   | Retain  |
| 18.64<br>Environment<br>Southland         | Issue 3                            | The submitter believes the second sentence of the issue contains questionable judgement and is not necessary.   | Delete the second sentence of Issue 3.  |

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|   | <b>2.11.2 Objectives</b> |   |   |
| <b>18.65 Environment Southland</b>        | Objectives               | Support   | Retain  |
| <b>53.16 NZ Transport Agency</b>          | Objective 1              | The submitter suggests that not all natural hazards can realistically be avoided.   | Amend Objective 1 as follows:<br><i>Actual or potential effects of natural hazards on people, communities and their businesses, property and infrastructure are understood and mitigated or reduced, resulting in the Invercargill community becoming more resilient.</i>   |
| <b>87.32 Transpower NZ Ltd</b>            | Objective 1              | Support 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. | (i) Amend Objective 1 as follows:<br>“Actual or potential effects of natural hazards on people, communities and their businesses, property and infrastructure are understood and avoided or <del>reduced</del> <u>mitigated</u> , resulting long-term in the Invercargill community becoming more resilient.”<br><br>(ii) And any consequential amendments. |
|   | <b>2.11.3 Policies</b>   |   |   |
| <b>18.66 Environment Southland</b>        | Policies                 | Generally supported   | Retain with the exception of the amendments set out below   |
| <b>53.17 NZ Transport Agency</b>          | Policies                 | The submitter 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.                                    | Rework the policies contained in section 2.11.3 Policies to ensure that they provide the clear direction necessary for effective policy making.   |
| <b>88.3 Federated</b>                     | Policy 1 –               | Support.  | Adopt the policy as proposed.   |

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| <b>Farmers</b>                                       | Awareness and Understanding                  |  |  |
| <b>65.30 ICC Environmental and Planning Services</b> | Policy 2 – Reduced Exposure                  | Support in part. The submitter considers the explanation should be amended to 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  | Expand the explanation   |
| <b>18.67 Environment Southland</b>                   | Policy 3 – Identification                    | The submitter believes the second sentence of the Explanation needs to be altered to make it read better.  | Add a comma between “public information” and “areas” in the second sentence of the explanation.  |
| <b>88.4 Federated Farmers</b>                        | Policy 3 – Identification                    | <p>Support 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.</p> <p>The submitter considers that there remains a level of contention in relation of 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.</p> | <p>Amend the wording of the policy as follows:</p> <p><b>Policy 3 Identification:</b> To identify areas at risk from the effects of natural hazard, <u>in consultation with landowners and after objective scientific research.</u></p>                                    |
| <b>65.31 ICC Environmental and Planning Services</b> | Policy 4 - Identification – Multiple Hazards | Support 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.   | <p>Amend the explanation as follows:</p> <p><u>“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...”</u></p> |

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| <b>18.68 Environment Southland</b>               | Policy 5 – Identification - Earthquake          | “Mercelli” is spelt incorrectly.   | Amend the spelling of “Mercelli” to “Mercalli in the policy and the explanation. |
| <b>117.11 Southern District Health Board</b>     | Policies 5 and 7                                | The submitter recommends that consideration be given to advising dwelling owners that their property is in an area 3m or 5m AMSL   | Consider advising residents where their property is in an area 3m or 5m AMSL.    |
| <b>18.69 Environment Southland</b>               | Policy 6 – Identification – Riverine Inundation | Support  | Retain   |
| <b>18.70 Environment Southland</b>               | Policy 7 – Identification – Sea Level Rise      | Supported. However, the 5 metres above mean 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. | Show the 5m amsl contour on maps in the District Plan.                           |
| <b>18.71 Environment Southland</b>               | Policy 8 – Subdivision                          | Supported, but the submitters suggests there will be debate around what constitutes “exacerbate significantly”   | Retain   |
| <b>18.72 Environment Southland</b>               | Policy 11 – Precautionary Approach              | Support  | Retain   |
| <b>18.73 Environment Southland</b>               | Policy 12 – Collaboration                       | Support  | Retain   |
|  | <b>2.11.4 Methods of Implementation</b>         |  |  |
| <b>18.74 Environment Southland</b>               | 2.11.4 (C)                                      | Support. The submitter suggests the assessment required should extend to consideration of stormwater flooding.   | Retain   |
| <b>87.33 Transpower NZ Ltd</b>                   | 2.11.4 (A) – (C)                                | Support in part. The submitter seeks assurance that technical and economic matters will be taken into consideration and suggests that  | (i) Amend Method of Implementation D (i) as follows:                             |

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|   |                   | 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 natural hazards.  | <p><b>“2.11.4 Methods of Implementation</b></p> <p>.....</p> <p>(B) Rules limiting subdivision and <u>inappropriate</u> activity in areas subject to risk from natural hazard.</p> <p>(D) Initiating environmental advocacy for:</p> <p>(i) Promoting long-term strategic withdrawal of key infrastructure and services from hazard-prone areas where this is technically <u>and economically viable</u>.</p> <p>(ii) Encouraging assessment of natural hazard and response to that hazard to be an integral part of all project planning.”</p> <p>(ii) And any consequential amendments.</p> |
| <b>SECTION 3.12 RULES</b>                 |                   |  |   |
| <b>88.84 Federated Farmers</b>            | 3.12.1 and 3.12.2 | Support. The submitter suggests there needs to be an acknowledgement that people knowingly move into such areas and take on the risks and benefits associated with this choice.  | Not stated.   |
| <b>18.96 Environment Southland</b>        | 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 coastline prone to erosion, but then the question of “how near” arises. The submitter believes the City Council needs to either establish a coastal erosion hazard overlay or specify a distance from the eroding coast | Amend the wording of the rule in respect of proximity to a coastline mapped on the Hazard Maps as eroding.  |
| <b>18.97 Environment</b>                  | 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  | Amend the rule to ensure that it does not apply to earthworks undertaken to clear sand from roadways or   |

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| <b>Southland</b>                                 |                       | streams to facilitate access or drainage.   | streams.   |
| <b>18.98 Environment Southland</b>               | 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         | Add “unless authorised by the asset management authority for the stopbanks.”   |
| <b>67.2 ICC Drainage Manager</b>                 | 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 | 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 |