

# NH - Matepā māhorahora - Natural Hazards

## Introduction

The District is susceptible to a wide range of natural hazards, including flooding, fault rupture, liquefaction, tsunami, slope instability, and sea water inundation from storm surges.

When natural hazards occur, they can result in damage to property and infrastructure, and lead to a loss of human life. It is therefore important to identify areas impacted by natural hazards and to restrict or manage subdivision, use and development, including infrastructure, relative to the natural hazard risk posed. This is in order to reduce the risk of damage to property and infrastructure and the potential for loss of human life.

The District Plan focuses on the following natural hazards as they are the hazards that present the greatest risk to life, property and infrastructure, and whose future effects can be addressed through appropriate measures:

- Flooding, including from sea water storm surges coupled with sea level rise;
- Fault rupture; and
- Liquefaction.

Where ~~freshwater~~ flooding may occur, a certification process enables a site specific assessment based on up-to-date modelling. ~~The approach to freshwater flood management in Kaiapoi involves the use of identified fixed minimum floor levels. The minimum fixed floor levels are shown on the planning map and have been determined from delineating areas or basins within Kaiapoi, with reference to different flood hazards and risks associated with pump failure.<sup>1</sup>~~

The main coastal hazard affecting the District is sea water inundation, which occurs through the Waimakariri River and Ashley River/Rakahuri channels. The sea water inundation extends beyond the mapped Coastal Environment inland. Because of this, and the fact that the sea water inundation extent in the District is affected by concurrent freshwater flows present in the rivers, coastal hazards are located within the Natural Hazards Chapter, rather than as a separate coastal hazard contained in the Coastal Environment Chapter. Areas potentially subject to sea water inundation are identified by the Coastal Flood Assessment Overlay.

Flooding and sea level rise are influenced by climate change. It is predicted that rainfall events will become more intense, storm events will become more common and the sea level will rise. The development of the flood assessment and coastal flood assessment overlays incorporate current climate change predictions. For the Waimakariri District, the modelling has been based on the climate change scenario of RCP 8.5, with 1m of sea level rise over the next 100 years.

Modelling indicates that the District is not susceptible to coastal erosion over the next 100 years, even when accounting for climate change, and as such the District Plan does not contain provisions for this hazard.

Slope stability is addressed through the earthworks provisions. These require appropriate measures and are incorporated into earthworks design to maintain stability of sloping sites.

The District is also susceptible to natural hazards such as tsunami, severe winds, and ground shaking from earthquakes. These hazards are primarily managed by other statutory instruments or processes including the Building Act 2004, Civil Defence Emergency Management Act 2002 and the Local Government Act 1974.

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<sup>1</sup> Environment Canterbury [316.52]. Natural Hazards s42A report.

A risk-based approach is taken which factors in the need to allow people and communities to use their property and undertake activities, while also ensuring that life or significant assets are not harmed or lost as a result of a natural hazard event. ~~The RPS recognises that for existing urban areas the community has already accepted some natural hazards risk in order to support the ongoing development of the District's existing towns. The RPS accordingly requires development in high hazard areas in these locations to be either avoided or mitigated.~~<sup>2</sup> The District Plan maps do not identify high flood<sup>3</sup> hazard areas ~~or high coastal flood hazard areas~~<sup>4</sup>, rather these are identified through the flood assessment certificate process. This enables the most up-to-date technical information to be used. However, as a guide, areas that are potentially high hazard can be identified through the Waimakariri District Natural Hazards Interactive Viewer. This interactive viewer does not form part of the District Plan.

The provisions in this chapter are consistent with the matters in Part 2 - District Wide Matters - Strategic Directions and give effect to matters in Part 2 - District Wide Matters - Urban Form and Development.

### Other potentially relevant District Plan provisions

As well as the provisions in this chapter, other District Plan chapters that contain provisions that may also be relevant to natural hazards include:

- Earthworks: this chapter contains provisions for earthworks occurring within a natural hazard overlay.
- Subdivision: this chapter contains provisions for subdivision being undertaken within a natural hazard overlay.
- Special Purpose Zone (Kāinga Nohoanga): how the natural hazards provisions apply in the Special Purpose Zone (Kāinga Nohoanga) is set out in Appendices SPZ(KN)-APP1 to SPZ(KN)-APP5 of that chapter.
- Any other District wide matter that may affect or relate to the site.
- Zones: the zone chapters contain provisions about what activities are anticipated to occur in the zones.

| Objectives   |  |
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| <b>NH-O1</b> | <p><b>Risk from natural hazards</b></p> <p>New subdivision, land use and development <u>other than infrastructure</u><sup>5</sup>:</p> <ol style="list-style-type: none"> <li>1. <del>manages natural hazard risk, including coastal hazards, in the existing urban environment to ensure that any increased risk to people and property is low;</del><sup>6</sup><br/><b>21</b> is avoided in the Ashley Fault Avoidance Overlay and high hazard areas <del>for flooding</del><sup>7</sup> outside of the urban environment where the risk to life and property are unacceptable; <b>and</b></li> <li>2. <u>avoids or mitigates natural hazard risk in the existing urban environment to ensure that any increased risk to life and property is acceptable; and</u><sup>8</sup></li> <li>3. <del>outside of the urban environment, in all other instances,</del><sup>9</sup> is undertaken to ensure natural hazard risk, <del>including coastal hazard risk,</del><sup>10</sup> to people and property is avoided or mitigated and the ability of communities to recover from natural</li> </ol> |

<sup>2</sup> Environment Canterbury [316.50]. Natural Hazards s42A report.

<sup>3</sup> Environment Canterbury [316.50]. Natural Hazards s42A report.

<sup>4</sup> Environment Canterbury [316.50]. Natural Hazards s42A report.

<sup>5</sup> Summerset Retirement Village [207.10] and ECan [316.57] for all these changes. Natural Hazards s42A report.

<sup>6</sup> Environment Canterbury [316.57]. Natural Hazards s42A report.

<sup>7</sup> Environment Canterbury [316.54]. Natural Hazards s42A report.

<sup>8</sup> Environment Canterbury [316.57]. Natural Hazards s42A report and amended in the Reply Report.

<sup>9</sup> Environment Canterbury [316.57]. Natural Hazards s42A report.

<sup>10</sup> Environment Canterbury [316.57]. Natural Hazards s42A report.

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|                     | hazard events is not reduced.   |
| <b>NH-O2</b>        | <p><b>Infrastructure <u>and critical infrastructure</u><sup>11</sup> in natural hazard overlays</b></p> <p>For infrastructure <u>and critical infrastructure</u><sup>12</sup> within natural hazard overlays:</p> <ol style="list-style-type: none"> <li>existing infrastructure, <u>including critical infrastructure</u>,<sup>13</sup> can be upgraded, maintained and replaced;</li> <li>new non-critical infrastructure does not increase the risk to life or property from natural hazard, including coastal hazard, events and is designed to maintain its integrity and ongoing function during and after natural hazard events, or is easily replaced;</li> <li><u>new</u><sup>14</sup> critical infrastructure is avoided in high <b>flood</b> hazard areas <b>and high coastal flood hazard areas</b>,<sup>15</sup> unless there is a functional need or operational need for the location or route.</li> </ol> |
| <b>NH-O3</b>        | <p><b>Natural hazard mitigation</b></p> <p>Adverse effects on people, property, infrastructure and the environment resulting from methods used to manage natural hazards are avoided or, where avoidance is not possible, mitigated.</p>  |
| <b>NH-O4</b>        | <p><b>Natural <u>defences features</u><sup>16</sup></b></p> <p>Natural <u>defences features</u> and systems are maintained to reduce the susceptibility of people, communities and property and infrastructure from natural hazard events.</p>  |
| <b><u>NH-O5</u></b> | <p><b><u>Climate change</u></b></p> <p><u>The effects of climate change, and its influence on sea levels and the frequency and severity of natural hazards, are recognised and provided for when assessing natural hazard risk.</u><sup>17</sup></p>  |
| <b>Policies</b>     |   |
| <b>NH-P1</b>        | <p><b>Identification of natural hazards and a risk-based approach</b></p> <p>Identify natural hazards, including coastal hazards, through the use of overlays and assess the risk for the management of subdivision, use and development within the overlays based on:</p> <ol style="list-style-type: none"> <li>the sensitivity of the building occupation to loss of life, damage to property from a natural hazard and the ability for communities to recover after a natural hazard event; and</li> <li>the level of hazard presented to people and property from a natural hazard, recognising that climate change will alter the frequency and severity of some natural hazard events.</li> </ol>  |
| <b>NH-P2</b>        | <p><b>Activities in high hazard areas for flooding within urban areas</b></p> <p><u>Manage Avoid or mitigate adverse effects arising from</u><sup>18</sup> subdivision, use and development for natural hazard sensitive activities within high <b>flood</b> hazard <b>and high coastal flood hazard</b><sup>19</sup> urban environments to ensure that:</p> <ol style="list-style-type: none"> <li>minimum floor levels are incorporated into the design of development to ensure the risk to life and potential for building damage from flooding is mitigated; and</li> </ol>  |

<sup>11</sup> Federated Farmers [414.93]. Natural Hazards Reply Report.

<sup>12</sup> Federated Farmers [414.93]. Natural Hazards Reply Report.

<sup>13</sup> Federated Farmers [414.93]. Natural Hazards Reply Report.

<sup>14</sup> RMA Schedule1 Clause 16(2) change – clause 1 covers existing infrastructure – clause 3 is intended to cover new infrastructure. Natural Hazards s42A report.

<sup>15</sup> Environment Canterbury [316.54]. Natural Hazards s42A report.

<sup>16</sup> Environment Canterbury [316.60]. Natural Hazards s42A report.

<sup>17</sup> Environment Canterbury [316.61]. Natural Hazards s42A report and amended in Reply Report.

<sup>18</sup> Environment Canterbury [316.63]. Natural Hazards s42A report.

<sup>19</sup> Environment Canterbury [316.54]. Natural Hazards s42A report.

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|              | <ol style="list-style-type: none"> <li>2. the <u>increase in<sup>20</sup> risk from flooding to on</u> surrounding properties is <u>not significantly increased no more than minor<sup>21</sup></u> and the net flood storage capacity is not reduced; and</li> <li>3. the conveyance of flood waters is not impeded; or</li> <li>4. the nature of the activity means the risk to life and potential for building damage from flooding is low.</li> </ol>   |
| <b>NH-P3</b> | <p><b>Activities in high hazard areas for flooding outside of urban areas</b></p> <p>Avoid subdivision, use and development for natural hazard sensitive activities outside urban environments in high <u>flood hazard and high-coastal flood hazard<sup>22</sup></u> urban environments unless:</p> <ol style="list-style-type: none"> <li>1. the activity incorporates mitigation measures so that the risk to life, and building damage is low;</li> <li>2. the <u>increase in<sup>23</sup> risk from flooding to on</u> surrounding properties is <u>not significantly increased; no more than minor<sup>24</sup></u>;</li> <li>3. the conveyance of flood waters is not impeded; and</li> <li>4. the activity does not require new or upgraded community scale natural hazard mitigation works.</li> </ol>   |
| <b>NH-P4</b> | <p><b>Activities outside of high hazard areas for flooding</b></p> <p>Provide for subdivision, use and development associated with natural hazard sensitive activities outside of high <u>flood hazard and high-coastal flood hazard<sup>25</sup></u> urban environments where it can be demonstrated that:</p> <ol style="list-style-type: none"> <li>1. the nature of the activity means the risk to life and potential for building damage from flooding is low; or</li> <li>2. minimum floor levels are incorporated into the design of development to ensure building floor levels are located above the flood level so that the risk to life and potential for building damage from flooding is <u>mitigated avoided<sup>26</sup></u>; and</li> <li>3. the <u>increase in<sup>27</sup> risk from flooding to on</u> surrounding properties is <u>not significantly increased no more than minor<sup>28</sup></u> and the net flood storage capacity is not reduced; and</li> <li>4. the <u>ability for the<sup>29</sup></u> conveyancing of flood waters is not impeded.</li> </ol> |
| <b>NH-P5</b> | <p><b>Activities within the Fault Awareness Overlay and Ashley Fault Avoidance Overlay</b></p> <p>For activities within fault overlays:</p> <ol style="list-style-type: none"> <li>1. only allow subdivision, use and development for natural hazard sensitive activities in the Ashley Fault Avoidance Overlay where the risk to life or property is low; and</li> <li>2. manage subdivision in the Fault Awareness Overlay so that the risk to life and property is low.</li> </ol>   |
| <b>NH-P6</b> | <p><b>Subdivision within the Liquefaction Hazard Overlay</b></p> <p>Manage subdivision within the Liquefaction Hazard Overlay to ensure that the risk to life and property is low.</p>  |
| <b>NH-P7</b> | <p><b>Additions to existing natural hazard sensitive activities</b></p> <p>Provide for additions to buildings for existing natural hazard sensitive activities where it can be demonstrated that:</p>   |

<sup>20</sup> Environment Canterbury [316.49]. Natural Hazards Reply Report.

<sup>21</sup> Environment Canterbury [316.49]. Natural Hazards s42A report.

<sup>22</sup> Environment Canterbury [316.54]. Natural Hazards s42A report.

<sup>23</sup> Environment Canterbury [316.49]. Natural Hazards Reply Report.

<sup>24</sup> Environment Canterbury [316.49]. Natural Hazards s42A report.

<sup>25</sup> Environment Canterbury [316.54]. Natural Hazards s42A report.

<sup>26</sup> Environment Canterbury [316.63]. Natural Hazards s42A report.

<sup>27</sup> Environment Canterbury [316.49]. Natural Hazards Reply Report.

<sup>28</sup> Environment Canterbury [316.49]. Natural Hazards s42A report.

<sup>29</sup> Environment Canterbury [316.49]. Natural Hazards s42A report.

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|               | <ol style="list-style-type: none"> <li>1. the additions provide for the continued use of the existing building; and</li> <li>2. the change in on site risk from the building additions to life and property is low; and</li> <li>3. the <u>increase in</u><sup>30</sup> risk from the natural hazard <del>to on</del> surrounding properties and people is <u>not significantly increased no more than minor</u>.<sup>31</sup></li> </ol>   |
| <b>NH-P8</b>  | <p><b>Subdivision, use and development other than for any natural hazard sensitive activities</b></p> <p>Allow for subdivision, use and development associated with activities that are not natural hazard sensitive activities within all natural hazard overlays as there is a low risk to life and property.</p>   |
| <b>NH-P9</b>  | <p><b><del>Community scale n</del>Natural hazard mitigation works<sup>32</sup></b></p> <p>Natural hazard mitigation works:</p> <ol style="list-style-type: none"> <li>1. undertaken by the Crown, the Regional Council or the District Council are enabled where community scale natural hazard mitigation works are necessary to protect existing communities from natural hazard risk which cannot reasonably be avoided, and any adverse effects on the values of any identified <u>SNA</u>.<sup>33</sup> ONL, ONF, SAL, scheduled natural character areas, the coastal environment, and Sites and Areas of Significance to Māori are mitigated; or</li> <li>2. not undertaken by the Crown, the Regional Council or the District Council, will only be acceptable where: <ol style="list-style-type: none"> <li>a. the natural hazard risk cannot reasonably be avoided;</li> <li>b. any adverse effects of those works on the values of any areas identified as <u>SNA</u>.<sup>34</sup> ONL, ONF, SAL, scheduled natural character areas and the coastal environment, and on sites and areas of significance to Māori are avoided, remedied or mitigated <del>in accordance with the provisions in those chapters</del><sup>35</sup>;</li> <li>c. the mitigation works do not transfer or create unacceptable hazard risk to other people, property, infrastructure or the natural environment; and</li> <li>d. the mitigation works do not <del>involve the construction of private flood mitigation measures such as stopbanks, or floodwalls to protect new hazard sensitive activities as these works could</del><sup>36</sup> result in significant residual risk to life or property if they fail.</li> </ol> </li> </ol> |
| <b>NH-P10</b> | <p><b>Maintenance and operation of existing infrastructure</b></p> <p><del>Allow for</del> <u>Enable</u><sup>37</sup> the operation, maintenance, replacement, minor upgrading, repair and removal of all existing infrastructure in identified natural hazard overlays.</p>  |
| <b>NH-P11</b> | <p><b>New below ground infrastructure and upgrading of infrastructure outside of high hazard areas</b></p> <p>Provide for new and upgrading of existing below ground infrastructure outside of high <del>flood</del> hazard <del>and high coastal flood hazard</del><sup>38</sup> areas, where:</p> <ol style="list-style-type: none"> <li>1. if located within a flood assessment or coastal flood assessment overlay, the original ground level is reinstated at completion of the works;</li> <li>2. it does not increase the risk to life or property from natural hazard events;</li> <li>3. it does not result in a reduction in the ability of people and communities to recover from a natural hazard event; and</li> <li>4. it is designed to maintain reasonable and safe operation during and after a natural</li> </ol>   |

<sup>30</sup> Environment Canterbury [316.49]. Natural Hazards Reply Report.

<sup>31</sup> Environment Canterbury [316.68]. Natural Hazards s42A report.

<sup>32</sup> MoE [277.28]. Natural Hazards s42A report.

<sup>33</sup> DoC [419.58]. Natural Hazards s42A report.

<sup>34</sup> DoC [419.58]. Natural Hazards s42A report.

<sup>35</sup> ECan [316.82]. Natural Hazards s42A report.

<sup>36</sup> MoE [277.28]. Natural Hazards s42A report.

<sup>37</sup> Transpower [195.57]. Natural Hazards s42A report.

<sup>38</sup> ECan [316.54]. Natural Hazards s42A report.

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|        | hazard event.   |
| NH-P12 | <p><b>New below ground infrastructure and upgrading of infrastructure within high flood<sup>39</sup> hazard areas</b></p> <p>Provide for the installation of new and upgrading of existing below ground infrastructure in high flood hazard <del>or high coastal flood hazard</del><sup>40</sup> areas where:</p> <ol style="list-style-type: none"> <li>1. the infrastructure does not exacerbate the natural hazard risk or transfer the risk to another site;</li> <li>2. the conveyance of flood waters is not impeded;</li> <li>3. there is a functional need or operational need for the infrastructure to be located in a high flood hazard <del>or high coastal flood hazard</del><sup>41</sup> area <del>and there are no practical alternatives</del><sup>42</sup>; and</li> <li>4. the location and design of the infrastructure address relevant natural hazard risk and appropriate measures have been incorporated into the design to provide for the continued operation.</li> </ol>   |
| NH-P13 | <p><b>New above ground critical infrastructure and upgrading of critical infrastructure within high flood hazard areas</b></p> <p>Only allow for the new and upgrading of existing above ground critical infrastructure in high flood hazard <del>or high coastal flood hazard</del><sup>43</sup> areas where:</p> <ol style="list-style-type: none"> <li>1. there is a functional need or operational need for that location, <u>including as a result of the linear nature of some infrastructure,</u><sup>44</sup> and there are no <del>practical reasonable</del><sup>45</sup> alternatives;</li> <li>2. the location and design of the infrastructure address relevant natural hazard risk and appropriate measures have been incorporated into the design to provide for the continued operation; and</li> <li>3. the infrastructure does not exacerbate the natural hazard risk or transfer the risk to another site.</li> </ol>  |
| NH-P14 | <p><b>New <del>infrastructure</del> and upgrading of infrastructure <u>and critical infrastructure</u><sup>46</sup> within fault overlays</b></p> <p>Within the fault overlays:</p> <ol style="list-style-type: none"> <li>1. provide for new and upgrading of existing non critical infrastructure below and above ground in the Ashley Fault Avoidance Overlay where: <ol style="list-style-type: none"> <li>a. it does not increase the risk to life or property from a natural hazard event; and</li> <li>b. it does not result in a reduction in the ability of people and communities to recover from a natural hazard event;</li> </ol> </li> <li>2. <u>only allow avoid</u><sup>47</sup>-new and upgrading of existing critical infrastructure below and above ground in the Ashley Fault Avoidance Overlay <del>unless where there is no reasonable alternative, in which case</del> the infrastructure <u>must be is</u> designed to<sup>48</sup>: <ol style="list-style-type: none"> <li>a. maintain, as far as practicable, its integrity and ongoing operation during and after natural hazard events; or</li> <li>b. be able to be reinstated in a timely manner;</li> </ol> </li> <li>3. enable small scale critical infrastructure and other infrastructure in the Fault Awareness Overlay, while ensuring that larger critical infrastructure does not increase the risk to life or property from natural hazard events unless:</li> </ol> |

<sup>39</sup> ECan [316.54]. Natural Hazards s42A report.

<sup>40</sup> ECan [316.54]. Natural Hazards s42A report.

<sup>41</sup> ECan [316.54]. Natural Hazards s42A report.

<sup>42</sup> Waimakariri Irrigation Limited [210.6]. Natural Hazards s42A report.

<sup>43</sup> ECan [316.54]. Natural Hazards s42A report.

<sup>44</sup> Waka Kotahi [275.22]. Natural Hazards s42A report.

<sup>45</sup> Transpower [195.58]. Natural Hazards s42A report.

<sup>46</sup> Federated Farmers [414.93]. Natural Hazards Reply Report.

<sup>47</sup> Transpower [195.59]. Natural Hazards Reply Report.

<sup>48</sup> Transpower [195.59]. Natural Hazards Reply Report.



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|               | <p><del>a. there is an operational or functional need or</del><sup>49</sup> there is no reasonable alternative, in which case the infrastructure must:</p> <p><del>a.</del> be designed to maintain, as far as practicable, its integrity and ongoing operation during and after natural hazard events; or</p> <p>b. be able to be reinstated in a timely manner.</p>   |
| <b>NH-P15</b> | <p><b>Natural features providing natural hazard resilience</b></p> <p>Protect natural features which assist in avoiding or reducing the impacts from natural hazards, <del>such as natural ponding areas, wetlands, water body margins and riparian margins, dunes, berms and beaches</del><sup>50</sup> from inappropriate subdivision, use and development and restore, maintain or enhance the functioning of these features.</p>  |
| <b>NH-P16</b> | <p><b>Redevelopment <u>Land use change</u></b><sup>51</sup> and relocation in coastal hazard and natural hazard overlays</p> <p>Encourage <del>redevelopment, or</del><sup>52</sup> changes in land use where that would reduce the risk of adverse effects from natural hazards, including managed retreat and designing for relocation or recoverability from natural hazard events.</p>  |
| <b>NH-P17</b> | <p><b>Hard engineering natural hazard mitigation within the coastal environment</b></p> <p>Only allow hard engineering natural hazard mitigation within the coastal environment that reduces the risk of natural hazards when:</p> <ol style="list-style-type: none"> <li>1. soft engineering measures would not provide an appropriate level of protection and it can be demonstrated that there are no other reasonable alternatives;</li> <li>2. the construction of hard engineering measures will not increase the risk from coastal hazards on adjacent properties that are not protected by the hard engineering measures;</li> <li>3. where managed retreat has not been adopted and there is an immediate risk to life or property from the natural hazard; <u>and</u></li> <li>4. it avoids the modification or alteration of natural <u>defences features</u><sup>53</sup> and systems in a way that would compromise their function as natural defences; <u>and</u></li> <li><del>5. significant adverse effects on natural defences and systems from those measures are avoided, and any other adverse effects are avoided, remedied or mitigated.</del><sup>54</sup></li> </ol> |
| <b>NH-P18</b> | <p><b><u>Fire and ice hazards risks</u></b><sup>55</sup></p> <p>Manage <del>wildfire and</del><sup>56</sup> vehicle crash risk on roads affected by ice hazard through restrictions on the planting of woodlots and shelterbelts.</p>   |
| <b>NH-P19</b> | <p><b>Other natural hazards</b></p> <p>Encourage the consideration of <u>a risk-based approach for</u><sup>57</sup> other natural hazards as part of subdivision, use and development <u>to achieve an acceptable level of risk, and where there is uncertainty in the likelihood or consequences of a natural hazard event, encourage the adoption of a precautionary approach.</u><sup>58</sup></p>   |

## Activity Rules

<sup>49</sup> Transpower [195.59]. Natural Hazards s42A report.

<sup>50</sup> CA & GJ McKeever [111.72], John Stevenson [162.75] Chloe Chai and Mark McKitterick [256.72] and Keith Godwin [418.79]. Natural Hazards s42A report.

<sup>51</sup> ECan [316.74]. Natural Hazards Reply Report.

<sup>52</sup> ECan [316.74]. Natural Hazards s42A report.

<sup>53</sup> CA & GJ McKeever [111.72], John Stevenson [162.75] Chloe Chai and Mark McKitterick [256.72] and Keith Godwin [418.79]. Natural Hazards s42A report.

<sup>54</sup> ECan [316.75]. Natural Hazards s42A report.

<sup>55</sup> Federated Farmers [414.96]. Natural Hazards Reply Report.

<sup>56</sup> Federated Farmers [414.96]. Natural Hazards Reply Report

<sup>57</sup> ECan [316.76]. Natural Hazards s42A report.

<sup>58</sup> ECan [316.76]. Natural Hazards s42A report and amended through the Reply Report.

## How to interpret and apply the rules

1. Some sites may have more than one overlay applying. The rules of all the applicable overlays apply.
- ~~2. For rules that refer to the Kaiapoi Fixed Minimum Finished Floor Level Overlay, the minimum floor level is specified in the planning map.<sup>59</sup>~~
3. Rules that refer to a Flood Assessment Certificate or Coastal Flood Assessment Certificate require a certificate to be obtained from the District Council to determine compliance with the rule. The alternative is to apply for resource consent as set out in the rule.
4. The District Council will issue a certificate, upon application, in accordance with the published Council guidance on the matter.
5. Certificates are valid for three years from the date of issue. If a land use consent is required, the five year period provided under the RMA to give effect to the resource consent overrides the three year certificate lifespan.
6. The Flood Assessment Certificate and Coastal Flood Assessment Certificate specify circumstances when required minimum building floor levels or land levels will not be provided.
7. The AEP flood event risk level, minimum floor levels and overland flow path locations are to be determined by reference to:
  - a. the most up to date models, maps and data held by the District Council and the Regional Council; and
  - b. any information held by, or provided to, the District Council or the Regional Council that relates to flood risk for the specific land.

8. The rules in the following District Wide chapters do not apply to community scale natural hazard mitigation activities addressed in rules NH-R8, NH-R9 and NH-R10.<sup>60</sup>

- a. CE - Coastal Environment;
- b. ECO – Ecosystems and Indigenous Biodiversity, with the exception of ECO-R1 and ECO-R2 which apply to NH-R10;
- c. NATC – Natural Character;
- d. SASM – Sites and Areas of Significance to Maori;
- e. NFL – Natural Features and Landscapes; and
- f. EW – Earthworks.

9. The flooding rules in this chapter only apply if an activity is proposed on a portion of a site that is identified as being subject to flooding or within a Flood Assessment Overlay, as opposed to being proposed on a site that has flooding or the Flood Assessment Overlay located elsewhere on the site.<sup>61</sup>

## Non-Coastal Hazards

| NH-R1   | Natural hazard sensitive activities   |   |
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| <b>Urban Flood Assessment Overlay</b><br><b>Kaiapoi Fixed Minimum</b> | <b>Activity status: PER</b><br>Where:<br>1. the building is erected to the level specified in an existing consent <del>notice decision</del> <sup>63</sup> that is less than five | <b>Activity status where compliance is not achieved: RDIS</b><br><b>Matters of discretion are restricted to:</b><br>NH-MD1 - Natural hazards general matters<br><b>Notification</b> |

<sup>59</sup> ECan [316.52]. Natural Hazards s42A report.

<sup>60</sup> ECan [316.82]. Natural Hazards Reply Report.

<sup>61</sup> RMA Schedule 1 clause 16(2)



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| <p><b>Finished Floor-Level Overlay<sup>62</sup></b></p>  | <p>years old; or</p> <p>2. the building:</p> <p>a. does not exceed the permitted building coverage for the zone; and</p> <p><del>i. if located within the Kaiapoi Fixed-Minimum-Finished-Floor-Level-Overlay, the building has a finished floor level equal to or higher than the minimum finished floor level shown on the planning map; or</del></p> <p><del>ii. if not located within the Kaiapoi-Fixed-Minimum-Finished-Floor-Level-Overlay,<sup>64</sup></del></p> <p><u>b.</u> the building has a finished floor level equal to or higher than the minimum finished floor level as stated in a Flood Assessment Certificate issued in accordance with NH-S1; <del>and</del></p> <p><del>b. is not located within an overland flow path as stated in a Flood Assessment Certificate issued in accordance with NH-S1.<sup>65</sup></del></p> | <p>An application for a restricted discretionary activity under this rule is precluded from being publicly notified, but may be limited notified.</p>   |
| <p><b>NH-R2 Natural hazard sensitive activities</b></p>  |  |   |
| <p><b>Non-Urban Flood Assessment Overlay Rural Zones<sup>66</sup></b></p> <p><b><u>Special Purpose Zone (Rangiora Airfield)<sup>67</sup></u></b></p> | <p><b>Activity status: PER</b></p> <p>Where:</p> <p>1. the building is erected to the level specified in an existing consent <del>notice decision<sup>68</sup></del> that is less than five years old; or</p> <p>2. <del>if located within the Non-Urban-Flood Assessment Overlay,<sup>69</sup></del> the building:</p> <p>a. is not located on a site within a high <del> flood<sup>70</sup></del> hazard area as stated in a Flood Assessment Certificate issued in accordance with NH-S1; and</p> <p>b. has a finished floor level equal to or higher than the minimum finished floor level as stated in a</p>  | <p><b>Activity status where compliance with NH-R2 (1), NH-R2 (2)(b), <del>NH-R2 (2)(c) and NH-R2 (3)</del> is not achieved: RDIS</b></p> <p><b>Matters of discretion are restricted to:</b></p> <p>NH-MD1 - Natural hazards general matters</p> <p><b>Activity status where compliance with NH-R2 (2)(a) is not achieved: NC</b></p> <p><b>Notification</b></p> <p>An application for a restricted discretionary activity under this rule is precluded from being publicly notified, but may be limited notified.</p> |

<sup>63</sup> ECan [316.77]. Natural Hazards s42A report.

<sup>62</sup> ECan [316.52]. Natural Hazards s42A report.

<sup>64</sup> ECan [316.52]. Natural Hazards s42A report.

<sup>65</sup> ECan [316.79]. Natural Hazards Reply Report.

<sup>66</sup> ECan [316.78]. Natural Hazards s42A report.

<sup>67</sup> Daniel Smith [10.1]. (SPZ(Rangiora Airfield) Reply Report.

<sup>68</sup> ECan [316.77]. Natural Hazards s42A report.

<sup>69</sup> ECan [316.78]. Natural Hazards s42A report.

<sup>70</sup> ECan [316.54]. Natural Hazards s42A report.

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|   | <p>Flood Assessment Certificate issued in accordance with NH-S1;<del> and</del></p> <p><del>c. is not located within an overland flow path as stated in a Flood Assessment Certificate issued in accordance with NH-S1; or<sup>71</sup></del></p> <p><del>3. if the activity is a residential unit or a minor residential unit and is located outside of the Non-Urban Flood Assessment Overlay and located within Rural Zones it has a finished floor level that is either:</del></p> <p><del>i. 400mm above the natural ground level; or</del></p> <p><del>ii. is equal to or higher than the minimum finished floor level as stated in a Flood Assessment Certificate issued in accordance with NH-S1.<sup>72</sup></del></p>   |   |
| <b>NH-R3</b>  | <b>Natural hazard sensitive addition to existing natural hazard sensitive activities</b>   |   |
| <p><b>Urban Flood Assessment Overlay</b><br/><b>Kaiapoi Fixed Minimum Finished Floor Level Overlay<sup>73</sup></b><br/><b>Non-Urban Flood Assessment Overlay</b><br/><b>Ashley Fault Avoidance Overlay</b><br/><b>Rural Zones<sup>74</sup></b></p> <p><b>Special Purpose Zone (Rangiora Airfield)<sup>75</sup></b></p> | <p><b>Activity status: PER</b><br/>Where:</p> <p>1. the addition to a building does not result in a new or additional natural hazard sensitive activity establishing on the site; and</p> <p>2. the addition:</p> <p>a. is not located within the Ashley Fault Avoidance Overlay; or</p> <p>b. is erected to the level specified in an existing <del>subdivision consent notice decision or on an approved subdivision consent plan<sup>76</sup></del> that is less than five years old; or</p> <p><del>c. if located in the Kaiapoi Fixed Minimum Finished Floor Level Overlay, any building footprint addition has a finished floor level equal to or higher than the minimum finished floor level shown on the planning map; or<sup>77</sup></del></p> <p><del>cd. if located within the Non-</del></p> | <p><b>Activity status where compliance is not achieved: RDIS</b><br/><b>Matters of discretion are restricted to:</b><br/>NH-MD1 - Natural hazards general matters</p> <p><b>Notification</b><br/>An application for a restricted discretionary activity under this rule is precluded from being publicly notified, but may be limited notified.</p> |

<sup>71</sup> ECan [316.79]. Natural Hazards Reply Report.

<sup>72</sup> ECan [316.78]. Natural Hazards s42A report.

<sup>73</sup> ECan [316.52]. Natural Hazards s42A report.

<sup>74</sup> ECan [316.78]. Natural Hazards s42A report.

<sup>75</sup> Daniel Smith [10.1]. SPZ(Rangiora Airfield) Reply Report.

<sup>76</sup> ECan [316.77]. Natural Hazards s42A report.

<sup>77</sup> ECan [316.52]. Natural Hazards s42A report.

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|                                      | <p><u>urban Flood Assessment Overlay, the addition is located on a site outside of a high hazard area as stated in a Flood Assessment Certificate issued in accordance with NH-S1.<sup>78</sup></u></p> <p>d. if located within any Flood Assessment Overlay, the <u>building footprint</u> addition is:</p> <ul style="list-style-type: none"> <li><del>i. located on a site outside of a high flood hazard area as stated in a Flood Assessment Certificate issued in accordance with NH-S1; and<sup>79</sup></del></li> <li><del>ii. is not located within an overland flow path as stated in a Flood Assessment Certificate issued in accordance with NH-S1; and<sup>80</sup></del></li> <li><del>iii. has a finished floor level equal to or higher than the minimum finished floor level as stated in a Flood Assessment Certificate issued in accordance with NH-S1; or</del></li> </ul> <p><del>e. if the activity is a residential unit or a minor residential unit and is located outside of the Non-Urban Flood Assessment Overlay and located within Rural Zones it has a finished floor level that is either:</del></p> <ul style="list-style-type: none"> <li><del>i. 400mm above the natural ground level; or</del></li> <li><del>ii. is equal to or higher than the minimum finished floor level as stated in a Flood Assessment Certificate issued in accordance with NH-S1.<sup>81</sup></del></li> </ul> |   |
| <b>NH-R4<sup>82</sup></b>            | <b><u>Above ground earthworks, buildings and new structures</u></b>   |   |
| <b><u>Urban Flood Assessment</u></b> | <b><u>Activity status: PER</u></b>  | <b><u>Activity status where compliance is not</u></b> |

<sup>78</sup> Summerset [207.13]. Natural Hazards s42A report.

<sup>79</sup> Summerset [207.13]. Natural Hazards s42A report.

<sup>80</sup> ECan [316.79]. Natural Hazards Reply Report.

<sup>81</sup> ECan [316.78]. Natural Hazards s42A report.

<sup>82</sup> ECan [316.79] for this entire new rule. Natural Hazards Reply Report.

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| <p><b>Overlay</b></p> <p><b>Non-Urban Flood Assessment Overlay</b></p>   | <p><b>Where:</b></p> <p>1. <u>the above ground earthworks, buildings and new structures:</u></p> <p style="padding-left: 20px;">a. <u>will not increase flooding on another property through the diversion or displacement of floodwaters; or</u></p> <p style="padding-left: 20px;">b. <u>meets the definition of land disturbance.</u></p> <p><u>Advice note: to avoid confusion, buildings and structures still need to meet the other provisions in this chapter.</u></p> | <p><b>achieved: RDIS</b></p> <p><b>Matters of discretion are restricted to:</b></p> <p><u>NH-MD5 - Floodwaters displacement and flowpath disruption</u></p> <p><b>Notification</b></p> <p><u>An application for a restricted discretionary activity under this rule is precluded from being publicly notified, but may be limited notified.</u></p>                         |
| <p><b>NH-R4<sup>83</sup></b></p>   | <p><b>Below ground infrastructure and critical infrastructure</b></p>   |   |
| <p><b>Urban Flood Assessment Overlay Kaiapoi Fixed Minimum Finished Floor Level Overlay Non-Urban Flood Assessment Overlay</b></p> | <p><b>Activity status: PER</b></p> <p><b>Where:</b></p> <p>1. <u>the profile, contour or height of the land is not permanently raised by more than 0.25m when compared to natural ground level.</u></p>   | <p><b>Activity status where compliance is not achieved: RDIS</b></p> <p><b>Matters of discretion are restricted to:</b></p> <p><u>NH-MD3—Natural hazards and infrastructure</u></p> <p><b>Notification</b></p> <p><u>An application for a restricted discretionary activity under this rule is precluded from being publicly notified, but may be limited notified.</u></p> |
| <p><b>Advisory Note</b></p> <p>• <u>This rule applies in addition to EI-R1 to EI-R56.</u></p>                                      |   |   |
| <p><b>NH-R5<sup>84</sup></b></p>   | <p><b>Above ground infrastructure that is not critical infrastructure</b></p>   |   |
| <p><b>Urban Flood Assessment Overlay Kaiapoi Fixed Minimum Finished Floor Level Overlay Non-Urban</b></p>                          | <p><b>Activity status: PER</b></p> <p><b>Where:</b></p> <p>1. <u>the profile, contour or height of the land is not permanently raised by more than 0.25m when compared to natural ground level; and</u></p> <p>2. <u>new infrastructure or an extension to existing</u></p>   | <p><b>Activity status where compliance is not achieved: RDIS</b></p> <p><b>Matters of discretion are restricted to:</b></p> <p><u>NH-MD3—Natural hazards and infrastructure</u></p> <p><b>Notification</b></p> <p><u>An application for a restricted discretionary activity under this rule is precluded from being publicly notified, but may be limited notified.</u></p> |

<sup>83</sup> ECan [316.79] for the entire rule. Natural Hazards Reply Report.

<sup>84</sup> ECan [316.79] for the entire rule. Natural Hazards Reply Report.

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| <p><b>Flood Assessment Overlay</b></p>   | <p>infrastructure:<br/> a. has a footprint of less than 10m<sup>2</sup>; or<br/> b. is not located within an overland flow path as stated in a Flood Assessment Certificate issued in accordance with NH-S1; or<br/> c. is limited to a customer connection.</p>  |   |
| <p><b>Advisory Note</b><br/> • This rule applies in addition to EI-R1 to EI-R56.</p>   |   |   |
| <p><b>NH-R65</b> Above ground critical infrastructure<br/> This rule does not apply to roads.<sup>85</sup></p>   |   |   |
| <p><b>Fault Awareness Overlay Urban Flood Assessment Overlay Kaiapoi Fixed Minimum Finished Floor Level Overlay Non-Urban Flood Assessment Overlay</b></p> | <p><b>Activity status: PER</b><br/> Where:<br/> 1. if located with the Fault Awareness Overlay, new <del>critical infrastructure</del> or <del>an extension to existing upgraded critical</del><sup>86</sup> infrastructure has a footprint of less than 100m<sup>2</sup> <del>per structure</del><sup>87</sup>; and<br/> 2. if located within a Flood Assessment Overlay <del>or the Kaiapoi Fixed Minimum Finished Floor Level Overlay</del><sup>88</sup> <del>new or upgraded critical infrastructure</del><sup>89</sup>:<br/> a. <del>the profile, contour or height of the land is not permanently raised by more than 0.25m when compared to natural ground level; and</del><sup>90</sup><br/> <del>ab the infrastructure</del></p> | <p><b>Activity status where compliance is not achieved: RDIS</b><br/> <b>Matters of discretion are restricted to:</b><br/> NH-MD3 - Natural hazards and infrastructure<br/> <b>Notification</b><br/> An application for a restricted discretionary activity under this rule is precluded from being publicly notified, but may be limited notified.</p> |

<sup>85</sup> Waka Kotahi [275.23]. Natural Hazards s42A report.

<sup>86</sup> RMA Schedule 1 clause 16(2) – replacing ‘extension to existing’ with the defined term ‘upgrading’. Natural Hazards s42A report.

<sup>87</sup> Transpower [195.61]. Natural Hazards s42A report.

<sup>88</sup> ECan [316.52]. Natural Hazards s42A report.

<sup>89</sup> RMA Schedule 1 clause 16(2) – replacing ‘extension to existing’ with the defined term ‘upgrading’, and a clause restructure. Natural Hazards Reply Report.

<sup>90</sup> ECan [316.79]. Natural Hazards s42A report.

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|  | <p>is located <del>on a site</del> outside of <del>a</del><sup>91</sup> high <del>flood</del><sup>92</sup> hazard area as stated in a Flood Assessment Certificate issued in accordance with NH-S1; <del>or and</del> <del>bc. new infrastructure or an extension to existing infrastructure:</del></p> <ul style="list-style-type: none"> <li><del>i. has a footprint of less than 103m<sup>2</sup> per structure attached to the ground</del><sup>93</sup>; or</li> <li><del>ii. c is located 3m or more</del><sup>94</sup> above ground level; <del>excluding any support base, towers or poles, at an elevation higher than the minimum finished floor level as stated in a Flood Assessment Certificate issued in accordance with NH-S1;</del><sup>95</sup> or</li> <li><del>iii. d has a finished floor level equal to or higher than the minimum finished floor level as stated in a Flood Assessment Certificate issued in accordance with NH-S1;</del> <del>and</del> <del>d. new buildings, or extensions to existing buildings that increase the footprint of the existing infrastructure are</del></li> </ul> |  |
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<sup>91</sup> RMA Schedule 1 clause 16(2) – clause restructuring and clause simplification to remove ‘on a site’. Natural Hazards Reply Report.

<sup>92</sup> ECan [316.54]. Natural Hazards s42A report.

<sup>93</sup> Transpower [195.61] and MainPower [249.176]. Natural Hazards s42A report.

<sup>94</sup> MainPower [249.176]. Natural Hazards s42A report.

<sup>95</sup> MainPower [249.176]. Natural Hazards s42A report.



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|                    | <p style="color: red;">not located within an overland flow path as stated in a Flood Assessment Certificate issued in accordance with NH-S1.<sup>96</sup></p>  |   |
|                    | <p><b>Advisory Note</b></p> <ul style="list-style-type: none"> <li>This rule applies in addition to EI-R1 to EI-R56.</li> </ul>  |   |
| <b>NH-R76</b>      | <b>Woodlots and shelterbelts</b>   |   |
| <b>Rural Zones</b> | <p><b>Activity status: PER</b><br/>Where:</p> <p style="color: red;"><del>1. any woodlot or shelterbelt shall comply with the following fire hazard setback distances, measured from the outside extent of the canopy at the time of planting:</del></p> <p style="color: red;"><del>a. 30m from any boundary of any adjoining site; and</del></p> <p style="color: red;"><del>b. 10m from any road.<sup>97</sup></del></p> <p><u>12.</u> any woodlot or shelterbelt established on the north side of South Eyre Road, Tram Road, Oxford Road, or Birch Hill Road shall comply with the following ice hazard height and setback distances:</p> <p>c. trees adjoining the road boundary shall be maintained at a height of no greater than 3m;</p> <p>d. trees capable of growing up to 6m in height shall be setback 5m from the road boundary; and</p> <p>e. trees capable of growing 8m in height or higher shall be setback 15m from the road boundary.</p> | <p><b>Activity status where compliance is not achieved: RDIS</b><br/><b>Matters of discretion are restricted to:</b><br/>NH-MD1 - Natural hazards general matters</p> <p><b>Notification</b><br/>An application for a restricted discretionary activity under this rule is precluded from being publicly notified, but may be limited notified.</p> |
| <b>NH-R87</b>      | <b>Maintenance of existing community scale natural hazard mitigation works</b>   |   |
| <b>All Zones</b>   | <b>Activity status: PER</b>  | <b>Activity status where compliance is not achieved: N/A</b>  |
| <b>NH-R98</b>      | <b>Upgrading existing community scale natural hazard mitigation works</b>  |   |
|                    | <i>The rule does not apply to the planting of vegetation as part of natural hazard mitigation works.</i>   |   |
| <b>All Zones</b>   | <b>Activity status: PER</b>  | <b>Activity status where compliance is not achieved: N/A</b>  |

<sup>96</sup> ECan [316.79]. Natural Hazards Reply Report.

<sup>97</sup> Federated Farmers [414.96]. Natural Hazards Reply Report.

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| <p><b>SASM</b></p> <p><b><u>Wāhi Tapu Overlay</u></b></p> <p><b><u>Wāhi Taonga Overlay</u></b></p> <p><b><u>Ngā Tūrangā Tūpuna Overlay</u></b></p> | <p><b><u>Activity status: PER<sup>98</sup></u></b></p> <p><b><u>Where:</u></b></p> <p>1. <u>the upgrading works and any other associated activities is within land previously disturbed by previous earthworks to the depth already disturbed.</u></p>  | <p><b><u>Activity status where compliance is not achieved: RDIS</u></b></p> <p><b><u>Matters of discretion are restricted to:</u></b></p> <p><b><u>SASM-MD1 - Wāhi tapu and wāhi taonga</u></b></p> <p><b><u>SASM-MD2 - Ngā tūrangā tūpuna</u></b></p> <p><b><u>SASM-MD3 - Ngā wai</u></b></p> <p><b><u>Notification</u></b></p> <p><b><u>An application for a restricted discretionary activity under this rule is precluded from being publicly notified, but may be limited notified only to Te Ngāi Tūāhuriri Rūnanga and HNZPT, in respect of sites on the New Zealand Heritage List Rārangī Kōrero, where the consent authority considers this is required, absent their written approval.<sup>99</sup></u></b></p> |
| <p><b>Ashley River / Rakahuri Saltwater Creek Estuary ONF Waimakariri River ONF Ashley River / Rakahuri SAL</b></p>                                | <p><b>Activity status: RDIS</b></p> <p><b>Matters of discretion are restricted to:</b></p> <p>NH-MD2 - Natural hazard mitigation works</p>  | <p><b>Activity status where compliance is not achieved: N/A</b></p>   |
| <p><b>NH-R109 Construction of new community scale natural hazard mitigation works</b></p>  |   |   |
| <p><i>The rule does not apply to the planting of vegetation as part of natural hazard mitigation works.</i></p>                                    |   |   |
| <p><b>All Zones</b></p>  | <p><b>Activity status: PER</b></p> <p><b>Where:</b></p> <p>1. the works are limited to soft engineering natural hazard mitigation;<del>and</del></p> <p><del>2. the works are not located within a site and area of significance to Māori (refer also to Rule SASM-R5).<sup>100</sup></del></p> | <p><b>Activity status where compliance is not achieved: RDIS</b></p> <p><b>Matters of discretion are restricted to:</b></p> <p>NH-MD2 - Natural hazard mitigation works</p>   |

<sup>98</sup> ECan [316.81]. Natural Hazards Reply Report.

<sup>99</sup> ECan [316.81]. Natural Hazards Reply Report.

<sup>100</sup> ECan [316.81]. Natural Hazards Reply Report.

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| <p>Ashley River / Rakahuri Saltwater Creek Estuary ONF Waimakariri River ONF Ashley River / Rakahuri SAL</p>      | <p><b>Activity status: RDIS</b><br/> <b>Matters of discretion are restricted to:</b><br/>                 NH-MD2 - Natural hazard mitigation works</p>   | <p><b>Activity status where compliance is not achieved:</b><br/>                 N/A</p> |
| <p><u>SASM Wāhi Tapu Overlay Wāhi Taonga Overlay Ngā Tūrangā Tūpuna Overlay Ngā Wai Overlay</u><sup>101</sup></p> | <p><u><b>Activity status: RDIS</b></u><sup>102</sup><br/> <u><b>Matters of discretion are restricted to:</b></u><br/> <u>SASM-MD1 - Wāhi tapu and wāhi taonga</u><br/> <u>SASM-MD2 - Ngā tūrangā tūpuna</u><br/> <u>SASM-MD3 - Ngā wai</u><br/> <u>Notification</u><br/> <u>An application for a restricted discretionary activity under this rule is precluded from being publicly notified, but may be limited notified only to Te Ngāi Tūāhuriri Rūnanga and HNZPT, in respect of sites on the New Zealand Heritage List Rārangī Kōrero, where the consent authority considers this is required, absent their written approval.</u><sup>103</sup></p> | <p><u><b>Activity status where compliance is not achieved:</b></u><br/> <u>N/A</u></p>   |
| <p><b>NH-R140</b></p>   | <p><b>New and upgrading of above and below ground existing infrastructure that is not critical infrastructure</b></p>  |  |
|   | <p><i>This rule shall not apply to customer connections.</i></p>   |  |
| <p>Ashley Fault Avoidance Overlay</p>   | <p><b>Activity status: RDIS</b><br/> <b>Matters of discretion are restricted to:</b><br/>                 NH-MD3 - Natural hazards and infrastructure</p>  | <p><b>Activity status where compliance is not achieved:</b><br/>                 N/A</p> |
| <p><b>NH-R121</b></p>   | <p><b>Natural hazard sensitive activities</b></p>  |  |

<sup>101</sup> ECan [316.81]. Natural Hazards Reply Report.

<sup>102</sup> ECan [316.81] for this entire addition

<sup>103</sup> ECan [316.81]. Natural Hazards Reply Report.

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| Ashley Fault Avoidance Overlay  | Activity status: DIS   | Activity status where compliance is not achieved: N/A |
| <p><b>NH-R132</b> Upgrading of existing or construction of new non-community scale natural hazard mitigation works for flood mitigation</p> |  |   |
| <p><i>The rule does not apply to the planting of vegetation as part of natural hazard mitigation works.</i></p>                             |  |   |
| Urban Flood Assessment Overlay Kaiapoi Fixed Minimum Finished Floor Level Overlay Non-Urban Flood Assessment Overlay                        | Activity status: DIS   | Activity status where compliance is not achieved: N/A |
| <p><b>NH-R143</b> New and upgrading of above and below ground critical infrastructure</p>   |  |   |
| Ashley Fault Avoidance Overlay  | <p>Activity status: <b>DIS-RDIS<sup>104</sup></b><br/>                 Where:<br/>                 1. the critical infrastructure involves any of the following:<br/>                 a. electricity substations, networks, and transmission and distribution installations, including the National Grid and the electricity distribution network;<br/>                 b. supply and treatment of water for public supply;<br/>                 c. stormwater and sewage treatment and disposal systems;<br/>                 d. radiocommunication and telecommunication installations and networks;<br/>                 e. strategic road and rail networks;<br/>                 f. petroleum storage and supply facilities;</p> <p><b><u>Matters of discretion are restricted to:</u></b></p> <p><b><u>NH-MD3 - Natural hazards and infrastructure<sup>105</sup></u></b></p> | Activity status where compliance is not achieved: NC  |

<sup>104</sup> Transpower [195.62]. Natural Hazards s42A report.

<sup>105</sup> Transpower [195.62]. Natural Hazards s42A report.

Coastal Hazards

| NH-R154 Natural hazard sensitive activities within the urban environment  |   |   |
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| Coastal Flood Assessment Overlay  | <p><b>Activity status: PER</b><br/>Where:</p> <ol style="list-style-type: none"> <li>1. the building is erected to the level specified in an existing subdivision consent notice or on an approved subdivision consent plan that was approved after 1 January 2021, and is less than five years old; or</li> <li>2. the building:                             <ol style="list-style-type: none"> <li>a. does not exceed the permitted building coverage for the zone; and</li> <li>b. has a finished floor level equal to or higher than the minimum finished floor level as stated in a Flood Assessment Certificate issued in accordance with NH-S1.</li> </ol> </li> </ol> | <p><b>Activity status where compliance is not achieved: RDIS</b><br/><b>Matters of discretion are restricted to:</b><br/>NH-MD4 - Natural hazards coastal matters</p> |
| <p><b>Advisory Note</b></p> <ul style="list-style-type: none"> <li>• Further information on hazards including technical reports and hazard maps identifying areas potentially subject to freshwater flooding, sea water inundation flooding and areas that are potentially high hazard flooding areas can be found on the Waimakariri District Natural Hazards Interactive Viewer. This further information does not form part of the District Plan.</li> </ul> |   |   |
| NH-R165 Natural hazard sensitive activities outside the urban environment   |   |   |
| Coastal Flood Assessment Overlay  | <p><b>Activity status: PER</b><br/>Where:</p> <ol style="list-style-type: none"> <li>1. the building is erected to the level specified in an existing <del>subdivision consent notice decision or on an approved subdivision consent plan</del><sup>106</sup> that was approved after 1 January 2021, and is less than five years old; or</li> <li>2 the building is identified as</li> </ol>   | <p><b>Activity status where compliance is not achieved: RDIS (see NH-R16 (3))</b></p>   |

<sup>106</sup> ECan [316.77]. Natural Hazards s42A report.

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|  | <p>being subject to <del>0.29m</del> <u>0.3m</u><sup>107</sup> or less of coastal flooding as stated in a Coastal Flood Assessment Certificate and has finished floor level equal to or higher than the minimum finished floor level as stated in a Coastal Flood Assessment Certificate issued in accordance with NH-S2.</p>   |  |
| <p><b>Coastal Flood Assessment Overlay</b></p> | <p><b>Activity status: RDIS</b><br/>Where:</p> <p>3. the building is identified as being subject to <del>between 0.3m and 0.99m</del> <u>more than 0.3m and less than 1m</u><sup>108</sup> of coastal flooding as stated in a Coastal Flood Assessment Certificate and is to be erected on raised land or utilises a combination of raised land and a raised floor level equal to or higher than the minimum requirements stated in a Coastal Flood Assessment Certificate issued in accordance with NH-S2.</p> <p><b>Matters of discretion are restricted to:</b><br/>NH-MD4 - Natural hazards coastal matters</p> | <p><b>Activity status where compliance is not achieved: NC</b></p> |
|  | <p><b>Advisory Note</b></p> <ul style="list-style-type: none"> <li>Further information on hazards including technical reports and hazard maps identifying areas potentially subject to fresh water flooding, sea water inundation flooding and areas that are potentially high hazard <b>flooding</b> areas can be found on the Waimakariri District Natural Hazards Interactive Viewer. This further information does not form part of the District Plan.</li> </ul>   |  |
| <p><b>NH-R176</b></p>                          | <p><b>Above ground critical infrastructure</b></p> <p><u>This rule does not apply to roads.</u><sup>109</sup></p>   |  |
| <p><b>Coastal</b></p>                          | <p><b>Activity status: PFR</b></p>  | <p><b>Activity status where compliance is not achieved:</b></p>    |

<sup>107</sup> RMA Schedule 1 Clause 16(2) amendment – to make the figures in clauses 2 and 3 better work together. Natural Hazards s42A report.

<sup>108</sup> RMA Schedule 1 Clause 16(2) amendment – to make the figures in clauses 2 and 3 better work together. Natural Hazards s42A report.

<sup>109</sup> Waka Kotahi [275.23]. Natural Hazards Reply Report.



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| <p><b>Flood Assessment Overlay</b></p> | <p>Where:</p> <p><del>1. the profile, contour or height of the land is not permanently raised by more than 0.25m when compared to natural ground level;<sup>110</sup> and</del></p> <p><del>a. new infrastructure or an extension to existing infrastructure has a footprint of less than 10m<sup>2</sup>; or<sup>111</sup></del></p> <p><del>1b. any new building that is identified as being subject to 0.29m 0.3m<sup>112</sup> or less of coastal flooding as stated in a Coastal Flood Assessment Certificate and has finished floor level equal to or higher than the minimum finished floor level as stated in a Coastal Flood Assessment Certificate issued in accordance with NH-S2; or</del></p> <p><del>2e. if not a building, new or upgraded critical<sup>113</sup> infrastructure, excluding any support base, towers or poles, is located 3m or more above ground level or has a footprint of less than 13m<sup>2</sup> per structure attached to the ground. above ground level at an elevation higher than the minimum floor level as stated in a</del></p> <p><del>Coastal Flood Assessment</del></p> | <p>for NH-R17 (1), NH-R17 (1)(a) and NH-R17 (1)(c):<br/> <b>RDIS</b><br/> <b>Matters of discretion are restricted to:</b><br/>                 NH-MD3 - Natural hazards and infrastructure<br/> <b>Activity status where compliance is not achieved for NH-R17 (1)(b): RDIS (see NH-R17 (2))</b></p> |
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<sup>110</sup> ECan [316.79]. Natural Hazards s42A report.

<sup>111</sup> MainPower [249.178] and Transpower [195.63]. Natural Hazards Reply Report.

<sup>112</sup> RMA Schedule 1 Clause 16(2) amendment – to make the figures in clauses 1 and 3 better work together. Natural Hazards s42A report.

<sup>113</sup> RMA Schedule 1 clause 16(2) – as for NH-R6 - replacing 'extension to existing' with the defined term 'upgrading', and a clause restructure. Natural Hazards Reply Report.

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|   | <del>Certificate issued in accordance with NH-S2.<sup>114</sup></del>  |  |
| <b>Coastal Flood Assessment Overlay</b> | <p><b>Activity status: RDIS</b><br/>Where:<br/> <del>23. any building that is identified as being subject to <u>between 0.3m and 0.99m more than 0.3m and less than 1m</u><sup>115</sup> of coastal flooding, as stated in a Coastal Flood Assessment Certificate, is erected on raised land or utilises a combination of raised land and a raised floor level equal to or higher than the minimum requirements stated in a Coastal Flood Assessment Certificate issued in accordance with NH-S2.</del></p> <p><b>Matters of discretion are restricted to:</b><br/>                 NH-MD4 - Natural hazards coastal matters</p> | <p><b>Activity status where compliance is not achieved: NC</b></p> <p><u>i. Any National Grid building that does not contain a habitable room: RDIS</u><sup>116</sup></p> <p><u>Matters of discretion are restricted to:</u><br/>                 NH-MD3 - Natural hazards and infrastructure</p> <p><u>ii. Any other building: NC</u></p> |
| <b>NH-R18<sup>117</sup></b>             | <b><del>Below ground infrastructure and critical infrastructure</del></b>  |  |
| <b>Coastal Flood Assessment Overlay</b> | <p><b>Activity status: PER</b><br/>Where:<br/> <del>1. the profile, contour or height of the land is not permanently raised by more than 0.25m when compared to natural ground level.</del></p>  | <p><b>Activity status where compliance is not achieved: RDIS</b><br/><b>Matters of discretion are restricted to:</b><br/>                 NH-MD4—Natural hazards coastal matters</p>   |
| <b>NH-R17<sup>118</sup></b>             | <b><u>Above ground earthworks, buildings and new structures</u></b>  |  |
| <b>Coastal Flood Assessment Overlay</b> | <p><b>Activity status: PER</b><br/><b>Where:</b><br/>                 1. <u>the above ground earthworks, buildings and new structures.</u></p>   | <p><b>Activity status where compliance is not achieved: RDIS</b></p> <p><b>Matters of discretion are restricted to:</b><br/> <u>NH-MD5 - Floodwaters displacement and flowpath disruption</u></p>  |

<sup>114</sup> MainPower [249.178] and Transpower [195.63]. Natural Hazards Reply Report.

<sup>115</sup> RMA Schedule 1 Clause 16(2) amendment – to make the figures in clauses 1 and 2 better work together. Natural Hazards s42A report.

<sup>116</sup> Transpower [195.63]. Natural Hazards Reply Report.

<sup>117</sup> ECan [316.79]. Natural Hazards Reply Report.

<sup>118</sup> ECan [316.79]. Natural Hazards Reply Report.

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|   | <p><a href="#">a. will not increase flooding on another property through the diversion or displacement of floodwaters; or</a><br/> <a href="#">b. meets the definition of land disturbance.</a></p> <p><a href="#">Advice note: to avoid confusion, buildings and structures still need to meet the other provisions in this chapter.</a></p> | <p><b>Notification</b><br/> <a href="#">An application for a restricted discretionary activity under this rule is precluded from being publicly notified, but may be limited notified.</a></p> |
| <b>NH-R198</b>                          | <b>Construction of new community scale natural hazard mitigation works involving hard engineering natural hazard mitigation</b>   |  |
|   | <i>The rule does not apply to the planting of vegetation as part of natural hazard mitigation works.</i>  |  |
| <b>Coastal Flood Assessment Overlay</b> | <b>Activity status: DIS</b>   | <b>Activity status where compliance is not achieved: N/A</b>   |
| <b>NH-R2019</b>                         | <b>Upgrading of existing or construction of new non-community scale natural hazard mitigation works for coastal flood hazard mitigation</b>   |  |
|   | <i>The rule does not apply to the planting of vegetation as part of natural hazard mitigation works.</i>  |  |
| <b>Coastal Flood Assessment Overlay</b> | <b>Activity Status: NC</b>  | <b>Activity status where compliance is not achieved: N/A</b>   |

### Natural Hazard Standards

| <b>NH-S1 Flood Assessment Certificate</b>  |   |
|--|---|
| <p>1. The District Council will issue a Flood Assessment Certificate (which will be valid for three years from the date of issue) that specifies:</p> <ul style="list-style-type: none"> <li>a. whether the activity is located on a site that is within a high <b>flood</b><sup>119</sup> hazard area; and</li> <li>b. whether the activity is located within an overland flow path; and</li> <li>c. where the activity is located on land that</li> </ul> <p>is within the Urban Flood Assessment Overlay, the minimum finished floor level in accordance with (e): or</p> | <p><b>Activity status where compliance is not achieved: N/A</b></p> |

<sup>119</sup> ECan [316.54]. Natural Hazards s42A report.

- d. where the activity is located on land that is within the Non-Urban Flood Assessment Overlay and is located on land that is outside of a high ~~flood~~<sup>120</sup> hazard area, the minimum finished floor level in accordance with (e); and
- e. the minimum finished floor level shall be

calculated as the highest of the following:

- i. flooding predicted to occur in a 0.5% AEP (1 in 200-year) Localised Rainfall Event plus up to 500mm freeboard (including allowances for climate change)<sup>121</sup>; or
- ii. flooding predicted to occur in a 0.5% AEP (1 in 200-year) Ashley River/Rakahuri Breakout Event concurrent with a 5% AEP (1 in 20-year) Localised Rainfall Event plus up to 500mm freeboard (including allowances for climate change)<sup>122</sup>; or
- iii. flooding predicted to occur in a 0.5~~4~~% AEP (1 in 200~~200~~-year) Storm Surge Event concurrent with a 5% AEP (1 in 20-year) River Flow Event with an allowance for sea level rise ~~based on an RCP8.5 climate change scenario~~<sup>123</sup>, plus up to 500mm freeboard.

2. Freeboard will be applied as follows:

- a. Low Hazard - 400mm freeboard
- b. Medium to High Hazard - 500mm freeboard<sup>124</sup>

### Advisory Notes

- An application form and guidance on how to obtain a Flood Assessment Certificate are available on the District Council's website.
- Certificates are valid for three years from the date of issue. If a land use consent is required, the five year period provided under the RMA to give effect to the resource consent overrides ~~the three year Certificate lifespan~~

<sup>120</sup> ECan [316.54]. Natural Hazards s42A Report.

<sup>121</sup> ECan [316.61]. Natural Hazards Reply Report.

<sup>122</sup> ECan [316.61]. Natural Hazards s42A Report.

<sup>123</sup> ECan [316.61]. Natural Hazards Reply Report.

<sup>124</sup> ECan [316.88]. Natural Hazards s42A report.

- Under NH-S1 the District Council will not provide a required minimum floor level for high **flood**<sup>125</sup> hazard areas within the Non-Urban Environment Flood Assessment Area. A resource consent will be required in this situation.
- Further information on hazards including technical reports and hazard maps identifying areas potentially subject to freshwater flooding, sea water inundation flooding and areas that are potentially a high hazard area can be found at the Waimakariri District Natural Hazards Interactive Viewer. This further information does not form part of the District Plan.
- The AEP flood event risk level, minimum floor levels and overland flow path locations are to be determined by reference to:
  - The most up to date models, maps and data held by the District Council and the Regional Council; and
  - Any information held by, or provided to, the District Council or the Regional Council that relates to flood risk for the specific land.
- The inclusion of climate change allowances should always be based on the latest government advice and the latest available data. A 100 year horizon should be used wherever possible and if forecast values do not extend to 100 years then the longest available horizon should be used. The climate change or emissions scenario should align with the latest government advice. Note that emissions scenario RCP8.5 was used in 2021 to develop the current iteration of the plan.<sup>126</sup>

**NH-S2 Coastal Flood Assessment Certificate**

- The District Council will issue a Coastal Flood Assessment Certificate (which will be valid for three years from the date of issue) for a site within the Coastal Flood Assessment Overlay that specifies:
  - a. whether the activity is located on a site that is likely to be affected by sea water storm surge flooding; and
  - b. whether the activity is located on a site that is within a high **coastal flood** hazard area<sup>127</sup>; and
  - c. where the activity is located on a site that is within the Non-Urban Flood Assessment Overlay and is outside of a high **coastal flood**<sup>128</sup> hazard area and (a) is met, the minimum land level in accordance with (d), or the minimum land and finished floor level combination in accordance with (e);
  - d. the minimum land level shall equal:
    - i. the flooding level predicted to occur in a **0.54%** AEP (1 in **1200**-<sup>129</sup>-year) Storm Surge Event  
  
concurrent with a 5% AEP (1 in 20-year) River Flow Event with **an allowance for sea level rise of 1m**

**Activity status where compliance is not achieved: N/A**

<sup>125</sup> ECan [316.54]. Natural Hazards s42A report.  
<sup>126</sup> ECan [316.61]. Natural Hazards Reply Report.  
<sup>127</sup> ECan [316.54]. Natural Hazards s42A report.  
<sup>128</sup> ECan [316.54]. Natural Hazards s42A report.  
<sup>129</sup> ECan [316.88]. Natural Hazards Reply Report.

- ~~based on an RCP8.5 climate change scenario<sup>130</sup>;~~
- e. the minimum land and floor level combination shall equal:
- i. land filled to be within 300mm of the required land level under (d); and
  - ii. a floor level that meets the minimum level specified in NH-S1.

### Advisory Notes

- NH-S2 only applies for natural hazard sensitive activities outside the urban environment under NH-R15 and above ground critical infrastructure under NH-R16.<sup>131</sup>
- An application form and guidance on how to obtain a Flood Assessment Certificate are available on the District Council's website.
- Certificates are valid for three years from the date of issue. If a land use consent is required, the five year period provided under the RMA to give effect to the resource consent overrides the three year Certificate lifespan.
- Under NH-S2 the District Council will not provide a required minimum floor/land level for high ~~coastal flood~~<sup>132</sup> hazard areas within the Non-Urban Flood Assessment Area. A resource consent will be required in this situation.
- Further information on hazards including technical reports and hazard maps identifying areas potentially subject to freshwater flooding, sea water inundation flooding and areas that are potentially high hazard ~~flooding~~<sup>133</sup> areas can be found on the Waimakariri District Natural Hazards Interactive Viewer. This further information does not form part of the District Plan.
- The AEP flood event risk level, minimum floor levels and overland flow path locations are to be determined by reference to:
  - The most up to date models, maps and data held by the District Council and the Regional Council; and
  - Any information held by, or provided to, the District Council or Regional Council that relates to flood risk for the specific land.
- Freeboard will be applied as follows:
  - a. Low Hazard - 400mm freeboard
  - b. Medium to High Hazard - 500mm freeboard<sup>134</sup>
- The inclusion of climate change allowances should always be based on the latest government advice and the latest available data. A 100 year horizon should be used wherever possible and if forecast values do not extend to 100 years then the longest available horizon should be used. The climate change or emissions scenario should align with the latest government advice. Note that emissions scenario RCP8.5 was used in 2021 to develop the current iteration of the plan.<sup>135</sup>

### Matters of Discretion

<sup>130</sup> ECan [316.61]. Natural Hazards Reply Report.

<sup>131</sup> RMA Schedule 1 Clause 16(2) – to add an advice note to clarify which rules trigger NH-S2. Natural Hazards Reply Report.

<sup>132</sup> ECan [316.54]. Natural Hazards s42A Report.

<sup>133</sup> ECan [316.54]. Natural Hazards s42A Report.

<sup>134</sup> ECan [316.88]. Natural Hazards s42A Report.

<sup>135</sup> ECan [316.61]. Natural Hazards Reply Report.



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| <p><b>NH-MD1</b></p> | <p><b>Natural hazards general matters</b></p> <ol style="list-style-type: none"> <li><u>The extent to which the <del>The setting of</del> minimum floor levels <del>are not achieved by the proposal and the effect of the lower levels, and the effects of</del> <sup>136</sup> minimum land levels and the predicted sea water and other inundation that will occur on the site.</u></li> <li><u>The frequency at which any proposed building or addition is predicted to be damaged and the <del>extent of damage likely to occur in such an event, including taking into account:</del></u> <ol style="list-style-type: none"> <li><u>the building material and design proposed;</u></li> <li><u>the anticipated life of the building;</u></li> <li><u>the proposed use of the building, including whether it is a retail, commercial or industrial activity or has a low staff occupancy rate, that would lessen the adverse effects of it being damaged in a natural hazard event;</u></li> <li><u>whether the building is relocatable; and</u></li> <li><u>for redevelopments, the extent to which overall risk will change as a result of the proposal.</u><sup>137</sup></li> </ol> </li> <li>The extent to which site access will be compromised in a natural hazard event and any alternative access provided.</li> <li>The extent to which the proposal causes flood water displacement or flow path disruption onto other sites.</li> <li>The extent to which any flood mitigation measures are proposed, their effectiveness and environmental effects, and any benefits to the wider area associated with flood management.</li> <li>The extent to which the proposal relies on Council infrastructure and the risks to that infrastructure from natural hazards, including taking into account maintenance and repair costs that might fall on the wider community.</li> <li>The extent to which there are any <u>positive negative</u> effects from <u>a reduction an increase</u><sup>138 139</sup> in floor levels in relation to neighbouring buildings or the streetscape.</li> <li>In relation to wildfire and ice, the degree of risk posed to life and property due to the non-compliance.</li> <li>In relation to tsunami risk, the nature of the proposed activity and the ease of evacuation.</li> </ol> | <p><b>Natural I</b></p> <ol style="list-style-type: none"> <li>The wat</li> <li>The dan</li> <li>The taki</li> <li>The to w</li> <li>The any</li> <li>The distr</li> <li>The and</li> <li>The mar</li> <li>The that</li> <li>The and</li> <li>The rela</li> <li>In r non</li> <li>In eva</li> </ol> |
| <p><b>NH-MD2</b></p> | <p><b>Natural hazard mitigation works</b></p> <ol style="list-style-type: none"> <li>The extent to which the natural hazard risk cannot be avoided.</li> <li>Any adverse effects of those works on the natural and built environment and on the cultural and spiritual values of Ngāi Tūāhuriri, including any matters specified in CE-MD1, ECO-MD1, NATC-MD3, NATC-MD4, NATC-MD5, NATC-MD6 and CE-MD1, <u>SASM MD1, SASM MD2 and SASM MD3.</u><sup>140</sup></li> <li>Any adverse effects on the values of any identified ONL, ONF or SAL including any matters specified in NFL-MD1.</li> <li>The extent to which the mitigation works transfer, or create, unacceptable hazard risk to other people, property, infrastructure, or the natural environment.</li> </ol>  |   |
| <p><b>NH-MD3</b></p> | <p><b>Natural hazards and infrastructure</b></p> <ol style="list-style-type: none"> <li>Any increase in the risk to life or property from natural hazard events.</li> <li><u>Any negative eE</u>ffects<sup>141</sup> on the ability of people and communities to recover from a natural hazard event.</li> <li>The extent to which the infrastructure will suffer damage in a hazard event and whether the infrastructure is designed to maintain reasonable and safe operation</li> </ol>  |   |

<sup>136</sup> Summerset [207.14]. Natural Hazards s42A report.

<sup>137</sup> Summerset [207.14]. Natural Hazards s42A report.

<sup>138</sup> ECan [316.90]. Natural Hazards s42A report.

<sup>139</sup> Summerset [207.14]. Natural Hazards s42A report.

<sup>140</sup> ECan [316.81]. Natural Hazards Right of Reply Report.

<sup>141</sup> Transpower [195.65]. Natural Hazards s42A report.

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|                             | <p>during and after a natural hazard event.</p> <p>4. The time taken to reinstate critical infrastructure following a natural hazard event.</p> <p>5. The extent to which the infrastructure exacerbates the natural hazard risk or transfers the risk to another site.</p> <p><del>6. The ability for flood water conveyance to be maintained.</del><sup>142</sup></p> <p><del>67.</del> The extent to which there is a functional need and operational need for that location and there are no <u>practical reasonable</u><sup>143</sup> alternatives.</p> <p><del>78.</del> The extent to which any mitigation measures are proposed, their effectiveness and environmental effects, and any benefits to the wider area associated with hazard management.</p> <p><del>89.</del> The <u>positive</u> benefits <del>derived from the installation</del> of <u>the</u> infrastructure.<sup>144</sup></p> <p><del>10. Any effects on cultural values.</del><sup>145</sup></p>   |
| <p><b>NH-MD4</b></p>        | <p><b>Natural hazards coastal matters</b></p> <p>1. The frequency at which any proposed building or addition is predicted to be damaged and the extent of damage likely to occur in such an event, taking into account:</p> <ol style="list-style-type: none"> <li>proposed land and floor levels;</li> <li>the building material and design proposed;</li> <li>the certainty of the modelling; and</li> <li>the time frame over which sea level rise inundation is predicted to occur.</li> </ol> <p>2. The extent to which the building is readily relocatable and when inundation is predicted to occur as a result of sea level rise, including the use of ‘trigger’ decision-points that take into account actual sea level rise and how such triggers will provide advance warning of the need to relocate the building, and proposals to manage residual risk.</p> <p>3. The extent to which site access will be compromised in a coastal hazards event and any alternative access provided.</p> <p>4. The extent to which any coastal flooding mitigation measures are proposed, their effectiveness and environmental effects, including displacement onto surrounding sites and disruption of flow paths and any benefits to the wider area associated with flood management.</p> <p>5. The extent to which the proposal relies on Council infrastructure and the risks to that infrastructure from coastal hazards, including taking into account maintenance and repair costs that might fall on the wider community.</p> <p>6. Whether there are any <u>positive negative</u> effects from <del>a reduction an increase</del><sup>146</sup> in floor or land levels in relation to accessibility, the height of the existing building, neighbouring buildings or the streetscape <del>or the financial viability of the development.</del><sup>147</sup></p> <p>7. Whether the site is located within an existing urban area and raised land or floor levels would create an unreasonable burden on the ability to continue to use an existing building and support the local community.</p> |
| <p><b><u>NH-MD5</u></b></p> | <p><b><u>Floodwaters displacement and flowpath disruption</u></b><sup>148</sup></p> <ol style="list-style-type: none"> <li><u>The likely extent of flooding on the site;</u></li> <li><u>The potential for the activity to exacerbate flooding on any other site; and</u></li> <li><u>The extent to which the earthworks, building or new structure impedes the free passage of floodwaters.</u></li> </ol>   |

<sup>142</sup> ECan [316.79]. Natural Hazards Reply Report.

<sup>143</sup> Transpower [195.58] and [195.65]. Natural Hazards Reply Report.

<sup>144</sup> Transpower [195.65]. Natural Hazards s42A report.

<sup>145</sup> Transpower [195.65]. Natural Hazards s42A report.

<sup>146</sup> ECan [316.91]. Natural Hazards s42A report.

<sup>147</sup> ECan [316.91]. Natural Hazards s42A report.

<sup>148</sup> ECan [316.79]. Natural Hazards Reply Report.

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