

**Before the Hearings Panel
At Waimakariri District Council**

Under Schedule 1 of the Resource Management Act 1991

In the matter of the Proposed Waimakariri District Plan

Between **Various**

Submitters

And **Waimakariri District Council**

Respondent

**Council S42A Officer's Summary Statement on the Natural Hazards Chapter
on behalf of the Waimakariri District Council
Date: 25 July 2023**

Introduction

1. My name is Andrew Willis. I am a consultant planner engaged by the Waimakariri District Council to support the development of the Natural Hazards Chapter. I prepared the s42A report on the Natural Hazards Chapter and can confirm that I have read all the submissions, further submissions, submitter evidence and relevant technical documents and higher order policies. I have the qualifications and experience as set out in my s42A report.
2. My intention with this summary is to provide the background to the Chapter and its development and summarise the key matters addressed in the s42A report. I will also highlight the matters covered in evidence by the submitters, however it is not my intention to provide a response on these matters at this time as I wish to hear the evidence and the Hearings Panel questions and I understand that there is a Council right of reply where I can provide a formal response to the matters heard at the hearing.

Natural Hazards Chapter - Background

3. The Waimakariri District is subject to a number of natural hazards including:
 - Flooding;
 - Sea water inundation;
 - Tsunami;
 - Earthquakes including ground shaking and fault rupture;
 - Liquefaction;
 - Wildfire; and
 - Ice.
4. The Waimakariri District is also susceptible to other natural hazards such as severe winds, rising groundwater and drought. Regarding coastal erosion, the District's coastline has been in a state of net accretion for some time and this is expected to continue at a rate that exceeds sea level rise for over 100 years under all sea level scenarios modelled. As such, given the accreting nature of the coastline, it is my opinion that there is no coastal erosion which requires a District Plan response at this time.

Operative District Plan Approach

5. Chapter 8 (Natural Hazards) of the Operative District Plan (ODP) contains the objectives, policies and methods for natural hazard management, while Chapter 27 (Natural Hazards) and Chapter 32 (Subdivision) contain rules. Flooding is the main natural hazard addressed by the Operative District Plan. However, this hazard is only identified in selected areas of the District as a result of previous scope-limited plan changes. As such, not all areas susceptible to flooding are covered by the existing District Plan provisions. In addition, known active earthquake fault traces and areas known to be potentially susceptible to liquefaction and lateral spreading are not addressed in the ODP, with the exception of Pegasus (for liquefaction).

Proposed District Plan Approach

6. The Proposed District Plan Natural Hazards Chapter takes a risk-based approach to the management of activities that may be affected by natural hazards. The proposed provisions identify consent categories for activities affected by natural hazards that reflect the consequence that the specific natural hazard presents. The proposed provisions seek to achieve the following outcomes:
 - Within urban areas – risk is generally to be managed by mitigation measures for future development;
 - Outside of urban areas – in low and medium hazard risk areas, risk to future development is managed through mitigation measures and is avoided in high hazard areas.
7. The rationale for this split approach within and outside of existing urban areas is identified in the Canterbury Regional Policy Statement (CRPS). The CRPS recognises that for existing urban areas the community has already accepted a degree of risk, and the ongoing development of these areas should be enabled where risk can be avoided or mitigated. This approach allows for development to still occur within the urban areas and provides flexibility and pragmatism in decision-making to balance the need for ongoing development and growth, while ensuring the risk to people and property is not unduly increased.
8. The proposed provisions also rely on a definition of ‘natural hazard sensitive activities’ to further refine the management of risk. Buildings which do not meet the definition of natural hazard sensitive activities are considered to present a sufficiently low risk from the impacts of natural hazards and are therefore permitted within the natural hazard overlays. Natural hazard sensitive activities are buildings that contain habitable rooms, or are serviced for water and wastewater or are places of assembly. Habitable rooms means any room used for the purposes of teaching or used as a living room, dining room, sitting room, bedroom, office or other room specified in the Plan to be a similarly occupied room (National Planning Standards Definition). The intention is to capture both residential and commercial buildings but exclude very small buildings or additions, buildings with unconstructed floors and garages.
9. Critical infrastructure has its own set of rules in the Natural Hazards Chapter to recognise the characteristics of this infrastructure and the higher order CRPS guidance.
10. A key method proposed to manage flood risk is the use of flood assessment certificates. Standardised minimum floor level assessments are introduced district wide for consistency and provided for as a rule standard for both permitted and restricted discretionary activities. The use of Flood Assessment Certificates to guide minimum floor levels and confirm activity status is used elsewhere in the region (for example Christchurch and Kaikoura) and is consistent with CRPS direction. The permitted activity status assists with reducing the potential number of resource consent applications, particularly outside of high flood hazard areas. The District Plan utilises flood assessment overlays to trigger the flood assessment certificate approach.
11. Within Kaiapoi a fixed minimum floor level approach was proposed (as opposed to requiring a flood assessment certificate), as the Council was comfortable providing more certainty to developers in this location due to the accuracy of the modelling and site characteristics.
12. I note that flood assessments with recommended minimum floor levels are already being provided by the Council for development in areas where ODP flood rules apply. As such, the requirement to provide these in the PDP as part of a certificate approach is not entirely new to the Council.

13. Actual flood depths, including high flood hazard areas, are not identified on the planning maps, but rather are identified outside the District Plan through the use of an external natural hazard viewer which can be regularly updated when flood modelling is undertaken at a district wide or property specific level. This external viewer can be viewed here:
<https://waimakariri.maps.arcgis.com/apps/MapSeries/index.html?appid=16d97d92a45f4b3081ffa3930b534553>
14. This approach provides developers and homeowners with a strong indication of the likely flood depths for specific properties, but also enables the most up-to date data to be utilised to determine the recommended floor levels. I note that the Council has relatively extensive flood modelling information and expertise, which has allowed it to develop the approach proposed.
15. While sea water inundation is a recognised hazard affecting coastal parts of the District, the provisions for managing this are located within the natural hazards chapter, rather than the Coastal Environment Chapter (as required under the National Planning Standards) because:
- areas subject to sea water inundation (and tsunamis) extend beyond the identified coastal environment, and as such the same provisions would need to be located in two separate chapters;
 - sea water inundation largely occurs in the district through overtopping of river channels and drains and is therefore dependent on the level of freshwater flow in the rivers and drains at the time of inundation. As such, sea water inundation is more accurately defined as a combined hazard, rather than being solely a coastal hazard; and
 - the areas subject to sea water inundation largely coincide with areas subject to freshwater flooding so including the provisions in one chapter is simpler.
16. Other commonly occurring natural hazards such as severe winds, rising groundwater levels, drought, ground shaking from earthquakes and coastal erosion are not specifically included in the District Plan for the following reasons:
- The Council is currently preparing a climate change strategy. The policy responses to changing ground water will be informed by the upcoming Climate Change strategy and may lead to a future district plan change depending on the findings;
 - The Building Code under the Building Act 2001 includes the structural measures to address ground shaking and wind loading. As such, any district plan provisions to address these hazards would be a duplication of the existing legislative requirements;
 - Drought is addressed through the emergency management provisions of the Civil Defence Emergency Management Act 2002;
 - As indicated earlier, coastal erosion is not occurring within the District for at least the next 100 years.
17. It is worth noting that, while there is general objective and policy support for tsunamis in the proposed Natural Hazards Chapter, the source events for tsunamis are largely distal and as such emergency management procedures such as evacuation are a valid response to ensure the risk to life from these events are reduced. In addition, ECan advice during the development of the Natural Hazards Chapter was that the available tsunami modelling was not sufficiently robust to rely on to inform district plan provisions.

18. I note that the management of natural hazards is relatively complicated and acknowledge that the natural hazards chapter itself is also complicated.

S42A Report – Key Points

19. There were 34 submissions with 488 submission points on the natural hazards chapter and a further three submissions on the planning maps. The s42A report responded to the submissions, relying on supporting evidence for the Council, which was provided by Mr Chris Bacon for flooding and Mr Damian Debski for coastal hazard matters. There was also a joint witness statement prepared between Mr Bacon (for the Council) and Mr Nick Griffiths (for ECan) on the extents of the Urban and Non-Urban Flood Assessment Overlays.
20. The main issues in contention addressed by the s42A Report were:
- The use of overlays, including the Kaiapoi Fixed Minimum Finished Floor Level Overlay;
 - The extent of the flood assessment overlays;
 - The definition of high coastal flood hazard area;
 - Appropriateness of provisions for managing critical infrastructure;
 - The management of ECan’s flood hazard structures across the PDP; and
 - Rules for managing flow path disruption and flood water displacement.
21. In response to overlay submissions, I recommended removing the Kaiapoi Fixed minimum finished floor level, retaining the urban and non-urban overlay approach, accepting the amended flood assessment overlays resulting from the JWS between the Council and ECan and amending the liquefaction overlay.
22. In response to high coastal hazard definition submissions, I recommended amending the definition of high coastal flood hazard, recombining this with a single amended definition for high hazard areas which is more consistent with the CRPS and better considers the combined coastal flooding that occurs in the District.
23. In response to submissions I reassessed the provisions managing critical infrastructure and recommended changes that are consistent with the majority of the submission points.
24. Based on my understanding of ECan’s flood management scheme, I assessed potential consenting requirements in district wide chapters (these were not identified in ECan’s submission) and recommended changes which I considered appropriate to facilitate the ongoing operation, maintenance and upgrading of ECan’s flood management schemes, depending on the topic. I note that maintenance works to a structure is not necessarily the same as upgrading, which is different again from erecting new structures and in my opinion it is appropriate to consider these differences relative to the matter being managed (e.g SNAs, NFLs, SASMs, etc).
25. I reassessed the proposed approach to managing flow path disruption and displacement, drawing on examples from two recently reviewed natural hazards chapters (the Kaikoura and Selwyn District Plans). My recommended changes replace the arbitrary 0.25m land raising threshold with a requirement to not exacerbate flooding on any other property.

S42A Report Errors

26. I note the following errors in the s42A report:

- As pointed out by Ms Mitten (in paragraph 104 of her evidence), NH-P14 should refer to ‘non critical’ infrastructure as opposed to ‘not critical’ infrastructure. This error arose as the wording had already been changed in the online version (via s16 Schedule 1) after the notification of the original wording and I ended up changing the correct wording back to the incorrect wording by mistake;
- As pointed out by Ms Mitten (in paragraph 136 of her evidence), the word ‘not’ has been erroneously omitted from the proposed rewording of NH-R18 in paragraph 567. It is however correct in Appendix A of the s42A report;
- As pointed out by Mr Griffiths (in paragraph 48 of his evidence), the change made to NH-S1 to refer to a 0.5% AEP for storm surge events should also have been made to NH-S2.
- Rule NH-R7 starts at ‘2’, when it should start at ‘1’. I have found that the formatting of these provisions using the template can be a challenge at times.

27. Based on instructions contained within Minute 6 from the Hearings Panel I understand that s42A report authors are to provide updated s42A reports showing these amendments in tracked changes. I intend to provide this as part of the right of reply package.

Submitter Evidence – key outstanding matters

28. Based on the evidence presented I consider that the matters in contention identified in the submissions has narrowed. The key outstanding matters remaining before the Hearings Panel are:
- The management of shelterbelts and woodlots for fire and ice management (Federated Farmers and Horticulture NZ);
 - The management of the national grid within fault and coastal flood assessment overlays (Transpower);
 - The use of maps (flood assessment overlays) within the natural hazards chapter (Kainga Ora);
 - The management of ECan’s flood hazard structures (ECan);
 - The exclusion of attached garages from the definition of flood sensitive activities (ECan); and
 - The management of off-site effects from the diversion and displacement of floodwaters (ECan).