Section 42A Report Part A: Plan Change 28 – Contaminated Land, Hazardous Substances, Natural Hazards and Hydro Inundation Variation 1 to Plan Change 26 Variation 1 to Plan Change 27

Report on submissions and further submissions

Author: Meg Justice

Date: 24 April 2025

Contents

List of submitters addressed in this report: 4
Abbreviations used in this report: 5
1. Purpose of Report 7
2. Qualifications and Experience 7
3. Scope and Format of Report 8
Submission Points Relating to other Stage 4 Plan Changes 8
4. Plan Change Overview 9
Natural Hazards and Hydro Inundation Chapters 9
Hazardous Substances and Contaminated Land Chapters 10
Variations to Plan Change 26 and Plan Change 27 10
5. Procedural Matters 10
6. Statutory Framework 11
7. Assessment of Submissions 12
Overview of Submissions 12
Structure of Report 12
Further Submissions 13
8. Provisions where no Change Sought 14
9. Topic 1 – Definitions 15
Proposed Definitions and Abbreviation 15
Submissions on the definition of critical infrastructure 16
Analysis 16
Recommendation 19
Submissions - other proposed definitions, the abbreviation, new definitions 19
Analysis 20
Recommendation 21
10. Topic 2 - Contaminated Land Chapter 22
Submissions 22
Analysis 22
Recommendation 22
11. Topic 3 – Hazardous Substances Chapter 23
Specific Provisions – Objectives HAZS-O1, HAZS-O2 and HAZS Policies 23
Submissions 23
Analysis 24
Recommendation 26
Specific Provisions – HAZS Chapter Rules and Matters of Discretion 26
Submissions 26
Analysis 27

Recommendation 28
12. Topic 4 – Natural Hazards Chapter 29
Broad Submissions and Introduction Section 29
Submissions 29
Analysis 30
Recommendation 31
Submissions on the NH Chapter Overlays 32
Submissions 32
Analysis 33
Recommendation 34
Submissions on the NH Chapter Objectives 34
Submissions 34
Analysis 36
Recommendation 38
Submissions on the NH Chapter Policies 39
Submissions 39
Analysis 41
Recommendation 48
Submissions on the NH Chapter Rules, Standards and Matters of Discretion 48
Submissions 48
Analysis 51
Recommendation 55
13. Topic 5 – Hydro Inundation Chapter 56
Submissions on the Whole HI Chapter and the HI Hazard Overlay 56
Submissions 56
Analysis 59
Recommendation 65
Submissions seeking changes to the HI Chapter Introduction, Objectives, Policies and Rules 65
Submissions 65
Analysis 66
Recommendations 68
14. Topic 6 – Variations 68
Variation 1 to PC 26 and Variation 1 to PC 27 68
Submissions 68
Analysis 69
Recommendation 71
15. Topic 7 - Site Specific Requests 72
Flood Hazard Assessment Overlay and Liquefaction Overlay 72

Submissions.....72
Analysis 73
Recommendation.....74

Table 1: Provisions with no submission or where no change was sought 14
Table 2: Definitions supported in submissions 15
Table 3: Submissions supporting the NH Chapter policies 39
Table 4: Supporting Submissions.....49
Table 5: Submissions generally opposing the HI Chapter and HI Hazard Overlay 56

Appendix 1 – Recommended Amendments to Provisions

Appendix 2 – Recommended Amendment to the Flood Hazard Assessment Overlay

Appendix 3 – Background on Waitaki Power Scheme and Hydro Hazard Mapping, Damwatch Engineering Ltd

Appendix 4 – Memo Regarding Flood Hazard Assessment Overlay at Takapō /Tekapo, N Griffiths, ECan

Appendix 5 – Memo Regarding Surface Fault Rupture Definition, H Jack, ECan

Appendix 6 – Information Sheet Dam Safety Questions and Answers

List of submitters addressed in this report:

Submitter Ref	Further Submitter Ref	Submitter Name	Abbreviation
PC28.01	FS3	BP Oil New Zealand Limited, Mobile Oil New Zealand Limited and Z Energy Limited	Fuel Companies
PC28.02		Springwater Trust	
PC28.03		Mary Murdoch	
PC28.04		Peter Finnegan	
PC28.05		James Leslie	
PC28.08		Anthony Honeybone	
PC28.09		Tekapo Landco Ltd & Godwit Leisure Ltd	TLGL
PC28.12		Grant and Natasha Hocken	
PC28.13		Mackenzie Properties Ltd	Mackenzie Properties
PC28.14		High Country Properties Ltd	High Country Properties
PC28.23		Fat Albert Ltd	
PC28.25		Kelvin Duncan	
PC28.26		John Ten Have	
PC28.29	FS10	Natural Hazards Commission Toka Tu Ake	NHC

PC28.30		Michael Beauchamp	
PC28.31		Transpower New Zealand Limited	Transpower
PC28.32		Jason Wakelin	
PC28.35		Chorus New Zealand Limited, Connexa Limited, FortySouth Group LP (trading as FortySouth), One New Zealand Group Limited and Spark New Zealand Trading Limited	The Telcos
PC28.36		Fairlie and Districts Residents and Ratepayers Society	FDRRS
PC28.37		Elizabeth Shadbolt	
PC28.39	FS4	Meridian Energy Limited	Meridian
PC28.41		Brent Lovelock	
PC28.42		Director-General of Conservation	DOC
PC28.45		NZ Transport Agency Waka Kotahi	NZTA
PC28.46	FS5	Genesis Energy Limited	Genesis
PC28.47		Chris White	
PC28.48		Nick Ashley	
PC28.50	FS8	Canterbury Regional Council	CRC
PC28.52		Susan Allan	
PC28.53		Alistair Shearer	
PC28.55		Gary Burrowes	
PC28.56		Nova Energy Limited	Nova
PC28.57		Andrew Hocken	
PC28.58		Brent Mander	
PC28.59		Rachel Trumper	
PC28.60		Associate Professor Anna Carr (PhD)	Dr Carr
PC28.63		Neville Cunningham	
PC28.64		Opuha Water Limited	OWL
PC28.65	FS6	New Zealand Defence Force	NZDF
	PC28.FS11	The Wolds Station Ltd	
	PC28.FS12	Bronwyn Murray	
	PC28.FS02	Lionel Green Family Trust	

Abbreviations used in this report:

Abbreviation	Full Text
AIRPZ	Airport Special Purpose Zone
Council	Mackenzie District Council
CLWRP	Canterbury Land and Water Regional Plan
CRPS	Canterbury Regional Policy Statement
CL	Contaminated Land
Damwatch	Damwatch Engineering Ltd
GRUZ	General Rural Zone
HAZS	Hazardous Substances
HI	Hydro Inundation
HI Hazard Overlay	Hydro Inundation Hazard Overlay

INF	Infrastructure
MDP	Mackenzie District Plan
MDPR	Mackenzie District Plan Review
NH	Natural Hazards
NH Overlays	Natural Hazards Overlays
NP Standards	National Planning Standards
NESTF	National Environmental Standards for Telecommunication Facilities) Regulations 2016
NPSET	National Policy Statement for Electricity Transmission 2008
NPS-REG	National Policy Statement for Renewable Electricity Generation
ONL	Outstanding Natural Landscape
ONF	Outstanding Natural Feature
PC13	Plan Change 13
PIC	Potential Impact Classification
REG	Renewable Electricity Generation
RLZ	Rural Lifestyle Zone
RMA	Resource Management Act 1991
SCA	Special Character Area
SUB	Subdivision
TEMP	Temporary Activities
V1PC26	Variation 1 to Plan Change 26 - Renewable Electricity Generation and Infrastructure
V2PC27	Variation 1 to Plan Change 27 - Subdivision, Earthworks, Public Access and Transport

1. Purpose of Report

1. This report is prepared under s42A of the RMA in relation to Plan Change 28 (PC28) Part A (Hazards and Risks) to the Mackenzie District Plan (MDP), Variation 1 to Plan Change 26 - Renewable Electricity Generation and Infrastructure (V1PC26), and Variation 1 to Plan Change 27 - Subdivision, Earthworks, Public Access and Transport (V2PC27). The proposed Historic Heritage and Notable Trees Chapters are the subject of a separate s42A entitled "s42A report PC28 Part B". Both reports should be read for a full picture of all recommendations on PC28. The purpose of this report is to provide the Hearing Panel with a summary and analysis of the submissions received on this plan change and to make recommendations in response to those submissions, to assist the Hearing Panel in evaluating and deciding on the submissions.

2. The analysis and recommendations have been informed by a technical memo prepared by Bill Veale of Damwatch Engineering Ltd (Damwatch), which is attached to this report as **Appendix 3**, and technical memos prepared by Nick Griffith and Helen Jack of CRC, which are attached to this report as **Appendix 4 and 5**. In preparing this report I have also had regard to the Strategic Direction Chapters, Subdivision Chapter, General Rural Zone (GRUZ) Chapter, Rural Lifestyle Zone (RLZ) Chapter, the Infrastructure (INF) Chapter and the Renewable Electricity Generation (REG) Chapter.

3. The conclusions reached and recommendations made in this report are not binding on the Hearing Panel. It should not be assumed that the Hearing Panel will reach the same conclusions having considered all the information in the submissions and the evidence to be brought before them, by the submitters.

2. Qualifications and Experience

4. My full name is Megan Justice. I am a Partner with the firm Taylor Planning. I have a Masters Degree in Regional and Resource Planning, awarded with Distinction, from Otago University and a Bachelor of Arts from Otago University. I am a full member of the New Zealand Planning Institute, a member of the Resource Management Law Association, and a certified Independent Commissioner under the Ministry for the Environment's Making Good Decisions Programme.

5. I have 23 years' planning experience as a planning consultant. My experience includes independent commissioner appointments, regional policy statement and regional and district plan development, including the preparation of plan provisions and accompanying s32 evaluation reports, and preparing and presenting s42A reports; policy analysis, including analysing proposed plans/policy statements and preparing advice and submissions for clients on RMA documents; preparing resource consent applications; and preparing notices of requirements for designations. For the Mackenzie District Plan Review (MDPR) process, I prepared the plan change provisions and s32 report and the s42A report for Plan Change 25 - Rural Lifestyle Zones (PC25), and I prepared the plan change provisions and s32 reports for the chapters being reviewed in PC28, V1PC26 and V2PC27.

6. Although this is a Council hearing, I confirm that I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note and that I have complied with it when preparing this report. I have also read and am familiar with the Resource Management Law Association / New Zealand Planning Institute "Role of Expert Planning Witnesses" paper. I confirm that I have considered all the material facts that I am aware of that might alter or detract from the opinions that I express, and that this evidence is within my area of expertise, except where I state that I am relying on the evidence of another person. Having reviewed the submitters and further submitters relevant to this topic I advise there are no conflicts of interest that would impede me from providing independent advice to the Hearings Panel.

3. Scope and Format of Report

7. This report considers the submissions and further submissions that were received in relation to PC28, Part A Hazards and Risks (except as explained in the sub-section below). It includes recommendations to either retain provisions without amendment, delete, add to or amend the provisions, in response to these submissions. All recommended amendments are shown by way of ~~strikeout~~ and underlining in **Appendix 1** to this Report, or, in relation to mapping, through recommended spatial amendments to the mapping in **Appendix 2** to this Report. Footnoted references to the relevant submitter(s) identify the scope for each recommended change. Where recommendations are made to either delete or add a provision, new provisions are numbered X, and no renumbering has occurred to reflect any additions or deletions. I anticipate that any renumbering requirements will be done in the Hearing Panel's decision version of the provisions.

8. The assessment of submissions generally follows the following format:

   - An outline of the relevant submission points;
   - An analysis of those submission points; and
   - Recommendations, including any amendments to plan provisions (and associated assessment in terms of s32AA of the RMA where appropriate).

9. Clause 10(2)(b), Schedule 1 of the RMA provides for consequential changes arising from the submissions to be made where necessary, as well as any other matter relevant to the PC28 arising from submissions. Consequential changes recommended under clause 10(2)(b) are footnoted as such.

10. Clause 16(2) of the RMA allows a local authority to make an amendment to a proposed plan without using a Schedule 1 process, where such an alteration is of minor effect, or may correct any minor errors. Any changes recommended under clause 16(2) are footnoted as such.

Submission Points Relating to other Stage 4 Plan Changes

11. Plan Changes 28, 29 and 30 were notified at the same time and prepared on an integrated basis.

12. Some definitions were proposed in PC28 which were also included in one or more of the other Stage 4 plan changes. Any submissions made on a definition which is used in more than one plan change are considered to be within the scope of each plan change that includes this definition. Submissions on definitions associated with PC28 Part A are addressed in this report, but have been considered in conjunction with the other s42A report authors for other relevant plan changes to ensure integration between the chapters which rely on the same definition.

4. Plan Change Overview

Natural Hazards and Hydro Inundation Chapters

13. This report relates to the management of hazards and risks in the District Plan. This includes the management of natural hazards that affect the District, which include flood hazard, earthquake fault rupture hazard, liquefaction and wildfire and the risk of hydro inundation in the event of a hydro-electricity dam or canal wall failure. This topic also includes the management of activities undertaken to manage natural hazard risk, such as flood mitigation works.

14. PC28 proposes to replace the Section 18 – Natural Hazards, and the provisions that manage natural hazards contained in Section 5 – Business Zones, Section 6 – Residential Zones, Section 7 – Rural Zones, Section 7B – Ohau River Precinct – Rural Lifestyle Zone, Section 8 – Twizel Rural Residential Zones, and the provisions that manage hydro inundation risks which are contained in Section 7 – Rural Zone, with the Natural Hazards (NH) Chapter and the Hydro Inundation (HI) Chapter. PC28 also deletes part of Section 13 – Subdivision, Development and Financial Contributions. The proposed chapters rely on some existing definitions and introduce new definitions. It is proposed to amend the Planning Maps and Appendices to include the following overlays in the District Plan Maps to assist with managing the effects of natural hazard and risk events:

- Flood Hazard Assessment Overlay
- Fault Hazard (Critical Infrastructure) Overlay
- Fault Hazard (Subdivision) Overlay
- Ostler Fault Hazard Area Overlay
- Liquefaction Overlay
- Hydro Inundation Hazard Overlay

15. The changes align with the National Planning Standards (NP Standards) framework and are driven by requirements to give effect to the CRPS. In relation to the HI Chapter, PC28 proposes to carry over the provisions that identify and manage this risk in the Rural Zone (now the GRUZ) and also include areas subject to this risk that are not covered by the operative District Plan. This includes three areas: Pūkaki Airport, Lyford Lane (Special Character Area (SCA) 12) and an area of RLZ land at Flanagan Lane.

Hazardous Substances and Contaminated Land Chapters

16. This report also relates to the management of the risk to the environment, people and property associated with the large-scale storage and use of hazardous substances, and the management of contaminated land. PC28 proposes to replace Section 10: Hazardous Substances and Section 17: Solid Waste Management with the Hazardous Substances (HAZS) Chapter and the Contaminated Land (CL) Chapter, and associated definitions. The proposed chapters rely on some existing definitions and introduce new definitions.

17. The proposed chapters align with the NP Standards framework. The HAZS Chapter removes duplication of the management of smaller quantities of hazardous substances, which are managed by other legislation, while managing the risks to the environment and people associated with the large-scale storage and use of hazardous substances which are defined as 'major hazard facilities'. The CL Chapter includes provisions to guide decision making on resource consent applications made under the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NESCL), relating to contaminated land.

Variations to Plan Change 26 and Plan Change 27

18. PC28 proposes to vary PC26 to amend the introduction statements in the REG and INF Chapters so that they refer to the updated Hazards and Risks Chapters. PC28 also proposes to vary PC27 to include new rules in the Subdivision (SUB) Chapter to manage the effects of natural hazards and risks.

5. Procedural Matters

19. At the time of writing this s42A report there have not been any pre-hearing conferences, clause 8AA meetings or expert witness conferencing in relation to submissions on this topic.

20. Kelvin Winston Duncan's (25.02) submission point is not considered to be in scope of PC28, as it seeks to control the placement and scope of renewable electricity generation facilities. The none of the Chapter affected by PC28 relate to these matters.

21. Due to the number of questions and concerns arising in response to the notified HI Chapter and the HI Hazard Overlay by landowners affected by the provisions, a response to the submissions was prepared and provided to all submitters on this chapter. This response provides information about how dam safety is managed in New Zealand, how the safety requirements are applied to the Waitaki Power Scheme, what the likelihood of a hydro inundation event is, how hydro inundation risk has been managed in the Mackenzie District prior to the notification of PC28, and if mitigating hydro inundation risk via a stop bank or similar is feasible, amongst other matters.

22. The response was prepared with the input of Meridian and Damwatch. A copy of the response that was prepared for the submitters is attached to this report in **Appendix 6**.

23. I have undertaken informal discussions and correspondence with some submitters, including the Telcos (submitter PC28.35), CRC (submitter PC28.50) and Meridian (submitter PC28.39) to understand the issues raised in submissions and to discuss potential options to address them.

6. Statutory Framework

24. The assessment under the RMA for this Plan Change includes whether:

    a. it is in accordance with the Council's functions (s74(1)(a));

    b. it is in accordance with Part 2 of the RMA (s74(1)(b));

    c. it will give effect to any national policy statement or operative regional policy statement (s75(3)(a) and (c)); and

    d. the provisions within the plan change are the most appropriate way to achieve the objectives of the District Plan (s32(1)(b)).

25. In addition, assessment of the plan change must also have regard to:

    a. any proposed regional policy statement, and management plans and strategies prepared under any other Acts (s74(2));

    b. the extent to which the plan is consistent with the plans of adjacent territorial authorities (s74 (2)(c)); and

    c. in terms of any proposed rules, the actual or potential effect on the environment of activities including, in particular, any adverse effect (s76(3)).

26. The assessment of the plan change must also take into account any relevant iwi management plan (s74(2A)).

27. Specific provisions within the RMA and in other planning documents that are relevant to PC28 are set out in the Section 32 Report. These documents are discussed in more detail within this report where relevant to the assessment of submission points.

28. The assessment of submission points has also been undertaken in the context of the Section 32 report prepared for PC28 Part A. All recommended amendments to provisions since the initial Section 32 evaluation was undertaken must be documented in a subsequent s32AA evaluation and this has been undertaken, where required, in this report.

7. Assessment of Submissions

Overview of Submissions

29. 65 submissions were received on PC28, V1PC26 and V1PC27, containing 337 submission points. 12 further submissions (162 submission points) were also received. Of these, 39 submissions and 9 further submissions relate to the Hazards and Risks Chapters.

30. No submitters support or oppose PC28 Part A as a whole. Some submitters (Meridian (39.01), DOC (42.01) and OWL (64.01) submitted in general support of PC28, except where the respective submissions sought specific relief. Nova (56.09) supports all amendments to the mapping in the MDP, and it supports all the provisions to be deleted as part of PC28 (56.10).

31. A number of submissions oppose the HI Chapter and the associated HI Hazard Overlay, and either seek it is removed and that this risk of hydro inundation is managed via methods outside of the MDP. Other submitters sought additional controls for activities in the GRUZ that may impact the operation of the Waitaki hydro schemes.

32. Several submitters have supported the CL Chapter and the HAZS Chapter, and some have sought refinements to the provision in the HAZS Chapter.

33. A number of submitters have sought changes to the NH Chapter, and in particular the way critical infrastructure is managed in the Natural Hazards Overlays (NH Overlays), including whether the policy direction should be more enabling of critical infrastructure in natural hazard areas. One submitter sought more stringent rules to prevent buildings containing vulnerable people from locating in high hazard areas. Other submitters have sought changes to the way flood hazards are proposed to be managed, seeking that alternatives to the free board method are included in the MDP, and for some flexibility in the way flood hazard assessments are prepared and their shelf-life.

34. Submitters have also sought changes to the SUB Chapter to provide objective and policy direction when considering subdivision application within the NH Overlays. Submissions on the proposed subdivision rules managing subdivision activities in the NH Overlays seek to provide an additional matter of discretion to enable effects of the Waitaki hydro schemes to be taken into account.

Structure of Report

35. The assessment in this report addresses submissions on the four chapters contained in the Hazards and Risks section of the MDP, followed by the consideration of submissions on the Variations to the REG, INF and SUB Chapters. As most of the submissions seeking amendments to the provisions were made on the NH Chapter, this section of the report is divided into five sub-sections. Submissions seeking site specific relief and other miscellaneous submissions are addressed in the final section of the report.

36. The structure of the report is as follows:

- Topic 1 Definitions
- Topic 2 Contaminated Land Chapter
- Topic 3 Hazardous Substances Chapter, which is divided into submissions on the objectives and policies, and submissions on the rules and matters of discretion.
- Topic 4 Natural Hazards Chapter, which is divided into:
    - Broad submissions and submissions on the Introduction statement
    - Submissions on the Natural Hazards Overlays
    - Submissions on the objectives
    - Submissions on the policies
    - Submissions on the rules, standards and matters of discretion
- Topic 5 Hydro Inundation Chapter
- Topic 6 Variations
- Topic 7 Site Specific Requests

Further Submissions

37. Further submissions have been considered in the preparation of this report, but in general, they are not specifically mentioned because they are limited to the matters raised in original submissions and therefore the subject matter is canvassed in the analysis of the original submission. Further submissions may however be mentioned where they raise a valid matter not addressed in an original submission. Individual recommendations on further submissions are not set out in this report. Instead, recommendations on the primary submissions indicate whether a further submission is accepted or rejected as follows:

38. Where a further submission supports a primary submission and the primary submission is recommended to be accepted, or where a further submission opposes a primary submission and the primary submission is recommended to be rejected, the further submission is recommended to be accepted.

39. Where a further submission supports a primary submission and the primary submission is recommended to be rejected, or where a further submission opposes a primary submission and the primary submission recommended to be accepted, the further submission is recommended to be rejected.

40. Where a further submission supports or opposes a primary submission and the primary submission is recommended to be accepted in part, then the further submission is recommended to be accepted in part.

8. Provisions where no Change Sought

41. The following provisions included within PC28 Part A, V1PC26 and V1PC27 were either not submitted on, or any submissions received sought their retention. As such, they are not assessed further in this report, and I recommend that the provisions are retained as notified (unless a cl 10(2)(b) or cl 16(2) change is recommended):

Table 1: Provisions with no submission or where no change was sought

Provisions	Supporting Submissions
CL-O1, CL-P1, CL-P2	CRC (50.11, 50.12), Fuel Companies (01.01)
HAZS-P1	Transpower (31.04), OWL (64.04), CRC (50.14)
HAZS-R4	Genesis (46.12), Meridian (39.07)
HAZS-MD1	CRC (50.17)
NH-P2	CRC (50.23), NHC (29.13), OWL (64.06)
NH-P9	OWL (64.06)
NH-R1	CRC (50.27), Fuel Companies (01.03), OWL (64.07)
NH-R2	CRC (50.27), Fuel Companies (01.03), NHC (29.17), OWL (64.07)
NH-R7, NH-R9	CRC (50.27), NHC (29.20)
NH-R10	CRC (50.27)
NH-MD1, NH-MD2, SCHED-NH1	OWL (64.11)
SUB-R7B, SUB-R7C, SUB-R7D	CRC (50.51), Nova (56.13)

9. Topic 1 – Definitions

Proposed Definitions and Abbreviation

Submissions Overview

42. Several parties support various definitions which were included in PC28. This is set out in the table below, along with noting those submitters seeking changes. The changes sought are then expanded on below. In addition, Nova (56.01) supports all definitions included in PC28 except as otherwise commented on in their submission.

Table 2: Definitions supported in submissions

Definition	Support	Change Sought
Critical infrastructure	NZTA (45.01), Transpower (31.01), Genesis (46.01), OWL (64.02), CRC (50.01)	Meridian (30.02), NHC (29.02), The Telcos (35.01), NZDF (65.01)
High flood hazard area	OWL (64.03), NHC (29.03)	CRC (50.04)
Liquefaction	OWL (64.03), CRC (50.03)	
Major hazard facility	Genesis (46.02), OWL (64.03)	
Natural hazard mitigation works	OWL (64.03), CRC (50.03)	
Natural hazard sensitive building	Genesis (46.03), NHC (29.04), Transpower (31.02), OWL (64.03)	CRC (50.05), NZDF (65.02)
Non critical infrastructure (in relation to Natural Hazards Chapter only)	The Telcos (35.02), OWL (64.03)	
Occupied building	OWL (64.03)	
Residual risk	OWL (64.03), CRC (50.03)	
Strategic transport network	OWL (64.03), CRC (50.03), NZTA (45.01)	
Surface fault rupture	OWL (64.03), CRC (50.03)	NHC (29.05)

43. CRC's submissions were neutral on the definitions of 'occupied buildings' (50.06) and 'Non critical infrastructure (in relation to Natural Hazards Chapter only)' (50.06).

44. CRC (50.07) submitted on the abbreviation for ARI, noting that there was an error in the abbreviation that requires correcting.

45. One submitter, NHC (29.06), has sought two new definitions for 'unacceptable risk from natural hazards', and 'unacceptable risk from surface fault rupture to building occupants and neighbours' be included in the MDP.

46. CRC (50.02) has submitted on the operative MDP definition for "Heavy industrial activity". This definition is not within the scope of PC28, nor any of the other Stage 4 plan changes or variations, as the scope of this definition is limited to its application of the definition to the plan

change and does not extend to changes to the definitions. As it is outside scope, this submission point has not been considered further.

Submissions on the definition of critical infrastructure

47. Four submitters seek changes to the definition of critical infrastructure, and five submitters (CRC (50.01), NZTA (45.01), Transpower (31.01), Genesis (46.01) and OWL (64.02)) seek the definition be retained as notified.

48. NZDF (65.01) supports the intent of including NZDF facilities in the definition, however it considers the term 'infrastructure' should replace 'facilities' in relation to NZDF infrastructure to capture only permanent infrastructure, and not temporary infrastructure that is part of temporary military training activities.

49. The Telcos (35.01) submission seeks the definition be amended to exclude 'telecommunications and radio communication networks' from the definition, in order for the District Plan to be consistent with the Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2016 (NESTF). It considers that while the NESTF does not include a definition for critical infrastructure, the rules that are proposed to apply to critical infrastructure in the NH Chapter are more onerous than the provisions for telecommunications and radio communications networks in the NESTF.

50. The NHC (29.02) supports the definition of critical infrastructure, which includes infrastructure required immediately after it is damaged or interrupted due to a natural hazard event. However, it considers that some activities included in the critical infrastructure definition are activities that are less resilient to the risks of natural hazard events, such as a healthcare facility with patients and staff who are more at risk than an unmanned communications facility. It has concerns about the provisions that manage critical infrastructure, and the activities which accommodate more vulnerable people together, and it seeks a more restrictive rule framework for the latter. For example, rule NH-R6 manages the potential effects caused by earthquake fault rupture on critical infrastructure and other specified buildings where groups of people may congregate. This relief would require either an amendment to the critical infrastructure definition, a new definition for activities such as healthcare facilities, education facilities, emergency services, for instance; or changes to the NH Chapter provisions.

51. Meridian's (39.02) submission seeks that the chapeau of the definition is amended to more faithfully match the definitions in the CRPS, by specifically stating that the definition includes any structures that support, protect or form part of critical infrastructure. Meridian note that the use of the term 'critical infrastructure' is only used in the NH Chapter of the notified version of PC28, meaning it is not necessary to include "(in relation to Natural Hazards Chapter only)" in the term being defined.

Analysis

52. The critical infrastructure definition is intended to capture infrastructure that is necessary for communities to be resilient to the effects of natural hazard events. The provisions seek to

ensure that critical infrastructure is resilient to the effects of natural hazards. This is achieved by avoiding locations in natural hazard areas in the first instance. Then, if the natural hazard area cannot be avoided because of the functional or operational needs of the infrastructure, the infrastructure must be designed to be as resilient as possible to the effects of the hazard. For example, the definition and associated provisions require that key bridges are designed to withstand most natural hazard events to ensure road networks remain open after a storm event.

53. I recommend that the relief sought by NZDF is accepted. I consider it appropriate that the definition only captures permanent buildings and structures which the NZDF would rely upon or require in the event of an emergency. Temporary buildings and structures such as those used for military training are not intended to be captured by this definition. I do not support changing 'facility' to 'infrastructure' as I consider that temporary infrastructure could still be captured, and it may not capture those permanent buildings and structures that the community or military relies upon in emergency situations. However, I consider that changing the word 'facilities' to 'buildings and structures' better aligns with the type of facilities which are intended to be managed by their inclusion in the critical infrastructure definition. I consider that aligning the wording with the proposed defined term 'temporary military training activity'[1] is required to ensure consistency and clarity for District Plan interpretation. I consider this change to be within the scope of the relief sort by NZDF. I therefore recommend that this submission (65.01) is accepted in part.

54. In relation to the Telco's submission, I consider that including 'telecommunications' facilities in the definition of critical infrastructure does not align with the NESTF, the User's Guide for which specifically states:

> *Section 6.11 of the Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2016 Users' Guide, published by the Ministry for the Environment (August 2018) confirms the exemption of regulated telecommunications activities from having to comply with District Plan natural hazard rules, via the following statement:*
>
> *Regulation 57 makes it clear that natural hazard rules in district plans do not apply to a regulated activity under the NESTF. It also makes clear that territorial authorities cannot make natural hazard rules that apply to regulated activities under the NESTF. This is because resilience is already factored into industry practice, and they will either avoid hazard areas or engineer structures to be resilient to the hazard risk. Natural hazards encompass the full breadth of hazards including flooding, instability, earthquake and climate change.*

55. While the CRPS definition for critical infrastructure includes 'telecommunications installations and networks', this RPS pre-dates the NESTF and subsequent updates have not amended this definition. I recommend that the submission by the Telcos (35.01) is accepted.

[1] Proposed via PC29.

56. I do not support the submission by NHC in relation to changing the critical infrastructure definition. As noted, the critical infrastructure definition includes infrastructure that is considered necessary or important for communities' resilience to the effects of natural hazard events. It is infrastructure, which if interrupted, would have a significant effect on communities within the District, Canterbury Region or wider populations and which would require immediate reinstatement. It is infrastructure that is required to be operating during and immediately after a natural hazard event to enable communities to function and recover. NHC's submission seeks a new definition to include a group of activities which are described as 'activities that are more sensitive to the risks of natural hazard events', such as those activities where groups of people congregate, and for a separate rule framework for these activities. I have addressed NHCs submission point, which I consider relating to the NH Chapter rule framework, in Topic 4 in this s42A report. For completeness, I recommend that NHCs submission on the critical infrastructure definition, and its request for a new definition is rejected (29.02).

57. I agree with Meridian's submission in part. The wording changes sought by Meridian are:

> *critical infrastructure (in relation to Natural Hazards Chapter only)*
>
> *Infrastructure that is necessary to provide Those necessary facilities, services, and installations which are critical or of significance to either New Zealand, Canterbury, or Mackenzie, which if interrupted, would have a significant effect on communities within the Mackenzie District, Canterbury region or wider populations and which would require immediate reinstatement. This includes any structures that support, protect or form part of critical infrastructure. Critical infrastructure includes.....*

58. I agree that making some amendments to the chapeau to more closely align the definition to the CRPS definition of the same, is required for consistency. I do not agree with deleting the words "in relation to Natural Hazards Chapter only", as I do not consider these words do any mischief, and they add clarity to the MDP. I note that Meridian has sought the term 'critical infrastructure' be used in other chapters, however these submission points[2] have not been recommended to be accepted. I do not support amending the first sentence to remove the words "facilities, services and installations" as I consider these terms better reflect the range of activities included below the chapeau. However, I do consider that including the word 'infrastructure' in the first sentence will add clarity to the definition. I do not support including the words "*This includes structures that support, protect or form part of critical infrastructure*". In my view this addition would significantly broaden the definition and may create uncertainty with its implementation. I also note that several submitters supported the definition as notified, including CRC. I therefore recommend that Meridian's submission (39.02) on the definition Critical Infrastructure is accepted in part. My recommended wording for the definition chapeau is:

> *Those necessary facilities, services, ~~and~~ installations and infrastructure which ~~are critical or of significance to either New Zealand, Canterbury, or Mackenzie, which~~ if*

[2] Submission points 39.21, 39.22, 18.02, 18.04, 18.06.

interrupted, would <u>have a significant effect on communities within the District, Canterbury region or wider populations and which would</u> require immediate reinstatement. Critical infrastructure includes:…

Recommendation

59. I recommend, for the reasons given above, that the critical infrastructure definition is amended to clarify that only permanent NZDF buildings and structures are included in the definition, and to delete 'telecommunications and' to align with the NESTF.

60. I recommend, for the reasons given above that the definition chapeau be amended to align more closely with the CRPS definition of the same.

61. The amendments recommended to definition are set out in **Appendix 1**.

62. The scale of change does not require a section 32AA evaluation because the changes to this definition do not alter the intent of this definition, and therefore original s32 evaluation still applies.

Submissions - other proposed definitions, the abbreviation, new definitions

63. CRC (50.04) seeks an amendment to the definition of 'high flood hazard area', to improve it grammatically, and so that it aligns more closely with the CRPS definition of 'High hazard area'. The amendment would add reference to water depth to the definition, which would mean that areas where flood water is greater than 1m in depth during a 500-year ARI event would be defined as a High Flood Hazard area.

64. CRC's (50.05) submission seeks that 'attached garages' are included in the definition of 'natural hazard sensitive building'. No reason is given for the submission. NZDF (65.02) seeks that the definition of natural hazard sensitive building exclude 'temporary buildings associated with Temporary Military Training Activities'. NZDF considers that, given the temporary nature of temporary military training activities, which are limited to 31 days (PC29 proposed rule TEMP-R6), the requirement to comply with the provisions of the NH Chapter are overly onerous.

65. CRC (50.07) seeks a correction to the abbreviation of 'ARI' to change it from "*~~Annual~~ Recurrence Interval*" to "*<u>Average</u> Recurrence Interval*".

66. NHC (29.05) seeks to add an additional sentence to the definition of 'surface fault rupture' to recognise that this event can also involve "uplift and subsidence (sinking) of the ground near the fault".

67. NHC (29.06) seeks that a new definition be included in the MDP for 'unacceptable risk from natural hazards', and a definition of 'unacceptable risk from surface fault rupture to building occupants and neighbours' are added to the Definitions Chapter. NHC's submission suggests including a definition of what the council considers as an 'unacceptable' level of risk, as the submitter considers that this term is open to interpretation and could cause confusion. Its submission recommends that a metric is created to consistently determine whether the level

of risk is acceptable or unacceptable, and that this metric is included in the MDP. No suggested wording for these definitions has been provided by the NHC.

68. CRC's further submission (08.02) opposes these NHC submission points. CRC considers that the rule framework in the proposed NH Chapter clarifies what risks are considered unacceptable. CRC considers that defining 'unacceptable risk from natural hazards' and 'unacceptable risk from surface fault rupture to building occupants and neighbours' is unnecessary. For example, it states that a natural hazard sensitive building in a high flood hazard area is an unacceptable risk, whereas outside a high flood hazard area it is an acceptable risk.

Analysis

69. I agree with CRC's submission on the 'high flood hazard area' definition, that it should include the water depth as this is an important part of determining flood events that pose a significant risk to people and property. The amendment will more closely align with the definition of 'High Hazard Area' in the CRPS, which gives effect to the CRPS. I also consider that the grammatical improvements sought improve the clarity of the definition. I recommend that this submission (50.04) be accepted.

70. I do not agree with CRC's submission seeking that attached garages are included in the definition of 'natural hazard sensitive buildings'. The definition as notified excludes attached and detached garages, because the effects associated with flood water entering a garage, which is not a habitable room, is considered acceptable and does not justify the potential costs associated with raising the finished floor level of a garage. In addition, the rule provides for finished floor levels to be stipulated (via the Flood Hazard Assessment) for new natural hazard sensitive buildings to prevent inundation for the specified flood event. Depending on the finished floor level stipulated in the Flood Hazard Assessment, issues may arise with forming a vehicle access into a garage. I therefore recommend that this submission (50.05) be rejected.

71. NZDF sought that its temporary buildings are excluded from the definition of natural hazard sensitive buildings so that the rules that manage the effects of flooding on natural hazard sensitive buildings do not apply to temporary buildings associated with military training activities. The intention of the definition of natural hazard sensitive buildings, and the associated rules, is to manage the effects of flooding on buildings that could be damaged if water entered them, such as a habitable room. The rule framework is intended to exclude buildings that are not considered to be at risk of flood damage, such as aircraft hangar and buildings without a floor. If the flood hazard management rules applied to these temporary buildings, then NZDF would be required to obtain a flood hazard certificate and adhere to the prescribed finished floor level each time they erected a temporary building. I do not consider that this is necessary nor justified for temporary buildings of this nature. However, in her s42a report for PC29, Ms White has recommended a clause 16(2) amendment to the proposed Temporary Activities (TEMP) Chapter introduction statement to state that the District Wide Chapters do not apply to temporary activities. This will mean that the NH Chapter will not apply to temporary activities such as 'temporary military training activities'. Therefore, I do not consider that the change to the definition of natural hazard sensitive buildings is necessary. I

recommend that this submission (65.02) be rejected as the relief is recommended to be accepted via the change recommended by Ms White to the TEMP Chapter.

72. I recommend that CRC's submission (50.07) seeking a correction to the abbreviation of 'ARI' is accepted. This change will correct an error in the notified abbreviation.

73. Based on advice from Helen Jack from CRC (refer **Appendix 5**), I do not agree with the submission by NHC to amend the definition of 'surface fault rupture' to include "*Can involve uplift and subsidence (sinking) of the ground near the fault."* The definition as notified is intended to manage the fracturing, ripping, buckling and folding of the ground, which does the most damage to infrastructure and buildings. If 'uplift and subsidence' was included, the purpose of the definition may be confused with wider-scale coseismal uplift and subsidence, which can affect a much wider area kilometres away from the fault, and which is not considered 'surface fault rupture'. I therefore recommend that this submission (29.05) is rejected.

74. In relation to the two new definitions sought by NHC, I agree with the CRC's further submission on this submission point. Including additional definitions for 'unacceptable risk from natural hazards' and 'unacceptable risk from surface fault rupture to building occupants and neighbours' and/or including a metric to be used to determine the level of risk that is acceptable in any one given situation is, in my view, unnecessary. These suggested definitions would need to account for a very wide range of situations and hazard events, and I do not consider it plausible to be able to draft a definition that is fit for this purpose. I consider a risk analysis metric would add a layer of complexity in the MDP that is not required. In my view, the provisions of the NH Chapter provide sufficient clarity to guide decision makers considering resource consent applications for activities that may be in areas susceptible to natural hazard risks, on a case-by-case basis. In particular, the rule framework and activity statuses applied to activities guide what activities are deemed to result in unacceptable risk in high flood hazard areas or fault hazard areas. For example, rule NH-R1 provides for new natural hazard sensitive buildings within the Flood Hazard Assessment Overlay as a permitted activity, if they are outside a High Flood Hazard Area, and the required finished flood level is complied with. If the activity is within a High Flood Hazard Area, the activity status changes to non-complying. For resource consent applications seeking development in High Flood Hazard Areas, an applicant or the Council could use a metric to assist with determining the level of risk on a case-by-case basis. However, I do not consider that it is necessary to develop a metric to be included in the MDP. I therefore recommend that the NHC's submissions (29.06) seeking the inclusion of definitions for 'unacceptable risk from natural hazards' and 'unacceptable risk from surface fault rupture to building occupants and neighbours', and/or a risk analysis metric, are rejected.

Recommendation

75. I recommend, for the reasons given above, that the definition for 'high flood hazard area' is amended to include a criteria of water depth for determining high flood hazard areas, and the grammatical improvements sought.

76. I recommend, for the reasons given above, that the definition for 'natural hazard sensitive building' is retained as notified.

77. I recommend that the abbreviation of ARI is corrected.

78. I recommend that the definition of 'surface fault rupture' is retained as notified.

79. The amendments recommended to the Definitions Chapter are set out in **Appendix 1**.

80. The scale of change does not require a section 32AA evaluation because it is a minor change to the definitions of 'high flood hazard area' and 'natural hazard sensitive building', that do not change the intent nor implementation of the definitions. The change to the abbreviation is a minor correction. Therefore, the original s32 evaluation still remains relevant.

10. Topic 2 - Contaminated Land Chapter

Submissions

81. Several submissions support the CL Chapter in whole and seek its retention as notified (NZDF (65.03), Nova (56.02), Fuel Companies (01.01), Transpower (31.03)). CRC (50.10) seeks an amendment to the chapter Introduction statement to alert plan users to the possibility of resource consents being required from CRC for activities taking place on potentially contaminated or contaminated land. CRC state that activities on contaminated land can also impact on the wider environment, and effects on freshwater are the responsibility of regional councils.

Analysis

82. I agree with CRC's submission and consider that including the additional sentence in the introduction for the CL Chapter will assist plan users to understand their environmental management requirements. The addition is the most appropriate way to achieve the Contaminated Land objective CL-O1, which seeks to protect human health and the environment, which includes freshwater, from the adverse effects of the subdivision, development or use of contaminated land. I recommend that the submission by CRC (50.10) is accepted.

Recommendation

83. I recommend, for the reasons given above, that the Introduction statement of the CL Chapter is amended to include the additional words alerting plan users to the possible requirement for a consent from CRC, to assist with environmental management associated with contaminated land undertaken by other authorities.

84. The amendments recommended to the Introduction statement of the CL Chapter are set out in **Appendix 1**.

85. The scale of change does not require a section 32AA evaluation because it is a minor change to the Introduction statement and does not change the general intent of this statement. Therefore, the original s32 evaluation still remains relevant.

11. Topic 3 – Hazardous Substances Chapter

Specific Provisions – Objectives HAZS-O1, HAZS-O2 and HAZS Policies

Submissions

86. Several submissions support the HAZS Chapter and seek either the whole chapter, or specific identified provisions, be retained as notified. The Fuel Companies submission (01.02) specifically supports HAZS-O1 and HAZS-P1. NZDF (65.04), Nova (56.03) and OWL (64.04) supports the whole chapter and seeks it is retained as notified. Genesis (46.06, 46.07) supports objectives HAZS-O1, HAZS-O2 and policy HAZS-P2 (46.08). CRC (50.13) supports objectives HAZS-O1 and HAZS-O2 and all the HAZS chapter policies (50.14). Transpower (31.04) supports policy HAZS-P1 as it directs the management of residual risk related to activities involving the use and storage of hazardous substances, as opposed to regulating the activity.

87. The FDRRS (36.04) made a general submission on the HAZS Chapter, stating that the chapter will not prevent an exposure event like that which occurred in 2022 resulting from an agrichemical residue in waste containers stored on a commercial site adjacent to their houses and vegetable gardens. FDRRS state that the HAZS Chapter does not give Council the tools it needs to deal with a situation like the one that occurred in 2022.

88. DOC (42.02) supports the HAZS Chapter and seeks its retention as notified, aside for the change sought to policy HAZS-P2 (42.03). DOC (42.03) has sought an amendment to the chapeau of HAZS-P2 to include a requirement for major hazard facilities to be 'designed' as well as located to mitigate adverse effects of these facilities, to better align with clause 2 of the policy.

89. Meridian (39.03) seeks that objective HAZS-O1 be amended because it considers it is too broad, and as worded it requires that all risks on the health and safety of people need to be eliminated. Meridian has sought that objective HAZS-O1 is amended as follows:

> *The benefits of the use and storage of hazardous substances are recognised while protecting human health and the environment ~~from~~ by minimising risks associated with these activities.*

90. Meridian (39.04) considers that objective HAZS-O2 should focus on protecting existing major hazard facilities from the reverse sensitivity effects that can result from new sensitive activities locating close to the former, and that the protection of existing sensitive activities from new major hazard facilities is addressed in HAZS-O1.

91. Meridian's (39.05) submission also seeks changes to HAZS Chapter policy HAZS-P3. It considers that policy HAZS-P3 aims to both protect existing major hazard facilities from the reverse sensitivity effects that can result from new sensitive activities locating close to the former *and*

protect existing sensitive activities from new major hazard facilities. Regarding protection of existing sensitive activities from new major hazard facilities, Meridian considers that this is already addressed in HAZS-P2. Meridian considers that HAZS-P3 should focus on protecting existing major hazard facilities from the reverse sensitivity effects that can result from new sensitive activities locating close to the former. Meridian's submission seeks an amendment to policy HAZS-P3 to better define the outcomes sought by this policy.

Analysis

92. I have considered the FDRRS's submission on the HAZS Chapter. The storage, use and disposal of many hazardous substances, such as pesticides, herbicides and fertilisers are managed by the Hazardous Substances and New Organisms Act 1996 (HSNO), which is administered by Worksafe New Zealand. Air discharges, including odour and discharges that cause a noxious or dangerous effect, are managed by the CRC, under the Canterbury Air Regional Plan. To avoid duplication, the MDP seeks to control effects that are not managed by the other more specific legislation or regulated by the CRC, or zone provisions in the District Plan. While the proposed HAZS Chapter does not include rules to manage the storage and use of hazardous substances (because this is managed by other legislation), this chapter does manage the establishment of new major hazard facilities, with an emphasis on managing the effects of major hazard facilities on sensitive activities, such as residential activities. The MDP also uses other tools to manage the effects on incompatible activities, through zoning, however the provisions do not apply retrospectively to existing activities. Following my consideration of this submission point, I do not consider that any changes to the HAZS Chapter are required. I therefore recommend that this submission point (36.04) is rejected.

93. I agree in part with Meridian's submission on objective HAZS-O1 that there is no requirement to avoid all risks on the health and safety of people. Objective 18.2.1 of the CRPS states:

> *Adverse effects on the environment from the storage, use, disposal and transportation of hazardous substances are avoided, remedied or mitigated.*

94. I therefore support in part the amendment to HAZS-O1 sought by Meridian as I consider it gives effect to CRPS objective 18.2.1. I consider that the wording sought by Meridian is wording that is used in a policy, rather than an outcome statement, which is required for an objective. I have recommended wording that I consider is appropriate for an objective:

> *The benefits of the use and storage of hazardous substances are recognised while protecting human health and the environment from risks associated with these activities <u>to an appropriate level</u>.*

95. I recommend that this submission point (39.03) is accepted in part.

96. Regarding Meridian's submissions on HAZS-O2, HAZS-P1 and HAZS-P2, I agree with Meridian that the HAZS Chapter provisions are seeking to provide for the use and storage of hazardous substances, including Major Hazard Facilities, while managing the potential adverse effects of these activities by:

- protecting major hazard facilities from the reverse sensitivity effects that can result from new sensitive activities locating close to the former; and

- protecting existing sensitive activities from new major hazard facilities.

97. Meridian's submission seeks that HAZS-O2 be amended to only manage reserve sensitivity effects, because the protection of existing sensitive activities from new major hazard facilities, is generally addressed in HAZS-O1. I do not agree with this amendment. HAZS-O1 does not only relate to the management of major hazard facilities, rather it is seeking to manage all storage and use of hazardous substances, and it provides objective direction when considering applications that do not comply with rule HAZS-R1 (the use and storage of hazardous substation located in a high flood hazard area). Objective HAZS-O2 provides specific objective direction for new major hazard facilities, to manage the risks of major hazard facilities located in proximity to sensitive activities. However, I consider that the title of objective HAZS-O2, which is 'Sensitive Activities' is misleading, as this objective is seeking to manage 'Major Hazard Facilities'. I therefore consider that Meridian's submission on HAZS-O2 will be addressed in part by amending the objective's title to 'Major Hazard Facilities' to make it clear that this objective is concerned with managing the effects of and on major hazard facilities. If this amendment is not considered to be within the scope of Meridian's submission, then this change could be made via a clause 16(2) amendment. I therefore recommend that Meridian's submission (39.04) is accepted in part.

98. I support DOC's submission on HAZS-P2. I consider the inclusion of the word 'design' in the policy chapeau better aligns with the mechanisms to be used to manage the adverse effects of major hazard facilities that are outlined in clause 2 of this policy. Clause 2 requires major hazard facilities to protect the health and safety of the community by internalising effects through site location, layout and design. This amendment improves the clarity of this policy and is appropriate to give effect to HAZS-O2. I recommend that this submission (42.02) is accepted.

99. I agree, in part, with Meridian's submission on policy HAZS-P3, which seeks amendments to this policy so that it is focused on protecting existing major hazard facilities from new sensitive activities locating close to the major hazard activity. Policy HAZS-P2 is tasked with protecting existing sensitive activities from new major hazard facilities, whereas policy HAZS-P3 manages proposals for new sensitive activities that may be in proximity to major hazard facilities. Policy HAZS-P3 is intended to strongly discourage new sensitive activities from establishing close to a major hazard facility by:

- requiring the consideration of potential reverse sensitivity effects that the proximity of the sensitive activity may generate for the major hazard facility; and

- considering the risks to the sensitive activity resulting from its (potential) proximity to the major hazard facility.

100. I consider that a change to the policy format to create two clauses, make these two outcomes clearer. My recommended amendment to HAZS-P3 is:

Ensure any new sensitive activity is separated from any existing major hazard facility to:

1. *minimise the potential for reverse sensitivity effects on the major hazard facility; and*
2. *avoid unacceptable risk to the sensitive activity.*

101. I consider that this amendment to HAZS-P3 is the most appropriate way to give effect to the objective HAZS-O2, and I recommend that this submission (39.05) is accepted in part.

102. Because I consider that the changes I have recommended do not alter the general intent of what was notified, I recommend that the NZDF (65.04), Fuel Companies submissions (01.02), Nova (56.03), OWL (64.04), CRC (50.13), Genesis (46.06, 46.07 and 46.08), Transpower (31.04) and DOC (42.02) submission points, insofar as they relate to the objectives and policies of the HAZS Chapter, be accepted in part.

Recommendation

103. I recommend, for the reasons given above, that the title of objective HAZS-O2 is amended to 'Major Hazard Facilities'.

104. I recommend, for the reasons given above, that policy HAZS-P2 is amended to add the words 'and designed' in the chapeau of the policy.

105. I recommend, for the reasons given above, that the formatting of policy HAZS-P3 is amended so the two distinct outcomes sought by this policy are clear.

106. The amendments recommended to HAZS-O2, HAZS-P2 and HAZS-P3 are set out in **Appendix 1** (HAZS Chapter).

107. The scale of change recommended to the HAZS Chapter objectives and policies does not require a section 32AA evaluation because they are minor changes to improve drafting, and do not alter the general intent of these provisions. Therefore, the original s32 evaluation still applies to these provisions.

Specific Provisions – HAZS Chapter Rules and Matters of Discretion

Submissions

108. As noted, in paragraph 85 above, several submissions support the HAZS Chapter and seek the whole chapter be retained as notified. Because these submissions also support the rules and matters of discretion, I have also considered these submissions in this section of the s42A report.

109. Submitters who supported the whole chapter include (NZDF (65.04) and Nova (56.03)). The Fuel Companies (01.02) support the whole chapter and specifically seek the retention of rule HAZS-R1. CRC (50.16 and 50.17) supports all the rules in the HAZS Chapter, and the matter of discretion, and seeks that these provisions be retained as notified. Genesis (46.09, 46.10, 46.11) also supports all the HAZS Chapter rules, stating that providing for the use and storage of

hazardous substances outside of High Flood Hazard Areas, and the control of new major hazard facilities, is supported.

110. Other submitters have supported specific rules and matters of discretion. OWL's submission (64.04) supports HAZS-R1 – R4, and the matters of discretion. Meridian (39.07) supports rule HAZS-R4 because the establishment of a sensitive activity on the same site as a major hazard facility in all zones is a non-complying activity under this rule, and it supports this approach so as to avoid potential reverse sensitivity effects on the effective and efficient operation and maintenance of the major hazard facility.

111. CRC (50.15) has sought a change to rule HAZS-R1 matter of discretion (a) to change the flood return event referred to from 0.5% AEP to 0.2% AEP[3], to align with the definition of 'high flood hazard area'.

112. NHC (29.07) has submitted on rule HAZS-R2.1, which requires applicants to provide a Quantitative Risk Based Assessment, supporting the rule in part. The Quantitative Risk Based Assessment is required to determine the level of risk associated with the proposal and identify any potential cumulative risks to existing sensitive activities. NHC considers that the word 'cumulative' should be removed from this condition, because single events can pose high risk to sensitive activities, and identifying any potential risks takes into account these events as well as cumulative risks.

113. Meridian (39.06) seeks an amendment to the matters of discretion in rule HAZS-R3. Rule HAZS-R3 establishes a restricted discretionary activity status for new sensitive activities on a site adjoining a major hazard facility. The matter of discretion associated with this rule requires the consideration of the risks associated with locating in proximity to the major hazard facility, that are identified in a Quantitative Risk Assessment (when considering a resource consent application made under this rule). Meridian is concerned that HAZS-R3 fails to clearly consider the potential reverse sensitivity effects of new sensitive activities on the effective and efficient operation and maintenance of an existing major hazard facility and seeks that discretion be directly applied to such matters.

Analysis

114. I agree with CRC's submission to amend the flood recurrence interval in HAZS-R1 matter of discretion (a) to align with the definition of 'high flood hazard area'. I note that the definition of High Flood Hazard Area uses slightly different terminology, referring to the 1:500 year ARI flood event. I therefore recommend that the matter of discretion is changed to 1:500 year ARI for consistency with the MDP definition. This amendment will make this matter of discretion consistent with the definition of 'high flood hazard area', which will improve consistency across the MDP. I therefore recommend that this submission (50.15) is accepted. I also consider that the same change should be made to HAZS-MD1 clause (c), for consistency. I consider this change

[3] A 0.2% ARI is equivalent to a 1:500 year ARI event.

can be made as a consequential amendment under clause 10(2)(B) related to CRC's submission point 50.15.

115. I agree with the NHC that the Quantitative Risk Assessment may be limited if it only considers cumulative risks to existing sensitive activities. I agree that single events can pose a high risk to sensitive activities so this assessment should not be limited to cumulative effects. I note that if the word 'cumulative' was removed from the condition, cumulative risks would not be precluded from being identified in a Qualitative Risk Assessment. However, in my experience, major hazard facilities often co-locate and therefore I consider it important that the cumulative risks of a new major hazard facility are specifically identified in a Qualitative Risk Assessment. Therefore, I recommend that the condition requires any potential risks (including cumulative risks) to be determined in the Qualitative Risk Assessment, and I consider that this amendment is the most appropriate way to achieve objective HAZS-O2. I recommend that this submission point (29.07) be accepted and that rule HAZS-R2.1 be amended as follows:

> *"A Quantitative Risk Based Assessment is provided which determines the level of risk associated with the proposal and identifies any potential ~~cumulative~~ risks (including cumulative risks)[4] to existing sensitive activities."*

116. I agree with Meridian's submission (39.06) seeking an additional matter of discretion for rule HAZS-R3 to enable the consideration of any potential reverse sensitivity effects that a sensitive activity may have on the major hazard facility. I agree that the consideration of potential reverse sensitivity effects should be considered when considering the actual and potential effects of a new sensitive activity on a site adjoining a major hazard facility. This addition to rule HAZS-R3 is the most appropriate way to achieve objective HAZS-O2. I recommend that this submission point (39.06) be accepted.

Recommendation

117. I recommend, for the reasons given above, that:

- Rule HAZS-R1(a) (the matter of discretion) is amended the apply to 1:500 year ARI flood return event, and a consequential change is made to HAZS-MD1 for consistency;
- Rule HAZS-R2.1 is amended to enable any potential risks, including cumulative risks, to be identified in the required Quantitative Risk Based Assessment; and
- Rule HAZS-R3 is amended to include an additional matter of discretion to allow for the consideration of reserve sensitivity effects.

118. The amendments recommended to HAZS Chapter rules and assessment matters are set out in **Appendix 1** (HAZS Chapter).

[4] Natural Hazards Commission (PC28.29.07)

119. I consider that the changes recommended to HAZS-R1(a) matter of discretion provides greater consistency throughout the MDP but does not alter the intent or effect of the provision. A further assessment under section 32AA is therefore not required for this change.

120. With respect to s32AA, for the changes I have recommended to rule HAZS-R2.1, which expands the scope of the Quantitative Risk Based Assessment to include any potential risks in addition to cumulative risks, there are likely some economic costs with providing this assessment, however I do not consider these will be significant given a Quantitative Risk Based Assessment is already required to be prepared. I consider that there will be social and environmental benefits which will outweigh these costs. As such, it will be more effective at achieving HAZS-O2.

121. For the change I have recommended to HAZS-R3, to include an additional matter of discretion to allow for the consideration of reverse sensitivity effects, this change may require additional measures to be imposed to manage reverse sensitivity effects, which may have economic costs. However, these costs will be outweighed by the benefits of the environmental, economic and social effects of preventing reverse sensitivity effects from arising. Therefore, I consider that this amendment will be more effective at achieving HAZS-O2.

12. Topic 4 – Natural Hazards Chapter

Broad Submissions and Introduction Section

122. This section deals with submissions on the Introduction section of the NH Chapter, and submissions that comment broadly on the NH Chapter as a whole.

Submissions

123. Several submitters expressed general overall support for the NH Chapter. These include Nova (56.04), DOC (42.04) and NHC (29.01), except where specific changes to provisions are sought. OWL (64.06) supports the Introduction statement and seeks it is retained as notified.

124. One submitter, A. Hocken (57.01) broadly opposes the NH Chapter, and specifically opposes the approach for risk mitigation in relation to flood risk at Hocken Lane Rural Residential Zone (in the Operative District Plan, now referred to as SCA 12 Lyford Lane, which is in the Rural Lifestyle Zone following PC25). A. Hocken's submission seeks that PC28 is withdrawn and that the Building Consent process is relied on to determine the appropriate height of any dwellings within Hocken Lane. CRC's further submission (08.14) opposes this submission as it considers relying on the building consent process does not give effect to the CRPS.

125. Three submissions have sought changes to the Introduction statement of the NH Chapter. DOC (42.05) seeks an amendment to recognise that natural hazards can also affect the natural environment, which it considers is a relevant matter to be managed in the District Plan. CRC (50.18) has sought an amendment to include landslides in the list of hazards, and to correct a referencing error. The NHC (29.08) seeks amendments to the Introduction sentences describing the fault overlays to better explain what each overlay represents. CRC's further submission

(08.03) supports the NHC submission in part and agrees that the wording in the Introduction to the NH Chapter should be amended but does not agree with the wording proposed by the NHC. CRC has provided alternative wording in its further submission.

Analysis

126. The support for the NH Chapter provisions is acknowledged. I do not agree with Mr Hocken's submission which seeks that the Flood Hazard Assessment Overlay and provisions proposed in the NH Chapter that manage flood risk for residential units at Lyford Lane are removed. Mr Hocken considers that the building consent process can be relied upon to manage the risk of flood waters damaging dwellings in this area. The New Zealand Building Code (Clause E1.3.2) requires buildings to be designed to prevent surface water from entering during a one-in-50-year flood event.[5] CRC's further submission (08.14) states that the Mackenzie District Council has a duty under section 31 of the RMA to control the effects of land use and development to mitigate risks associated with natural hazards. Under section 74 of the RMA, district plans must be prepared in accordance with section 31 of the RMA. The CRPS requires new subdivision, use and development that increases the risks associated with natural hazards to be avoided (objective 11.2.1), and policy 11.3.1 seeks to avoid new subdivision, use and development of land in high hazard areas unless it is not likely to result in loss of life or injury, significant damage to property, new or upgraded hazard mitigation or an exacerbation of effects. The CRPS definition for high hazard areas includes "*flood hazard areas subject to inundation events where the water depth (metres) x velocity (metres per second) is greater than or equal to 1, or where depths are greater than 1 metre, in a 0.2% AEP flood event*". In my view, relying on the building consent process to manage the risks of flooding effects would not give effect to the CRPS. Therefore, I recommend that this submission (57.01) be rejected. Mr Hocken states that there is an established residential unit at the site he is referring to in his submission. I note that the provisions in the NH Chapter will not apply retrospectively.

127. CRC's submission sought a correction to the Introduction statement in the NH Chapter to delete the reference to a 'Rural-Urban Interface Overlay', which was a method considered to assist with managing wildfire spread. This overlay is not part of PC28, and instead, the rural-urban interface is defined in rule NH-R10 and does not rely on an overlay. I agree with this submission that the words should be deleted, as the approach for managing wildfire spread does not include an overlay in the District Plan. I recommend that this submission (50.18) is accepted in part.

128. I do not recommend accepting CRC's submission point seeking that landslides are included in the list of natural hazards managed via the NH Chapter, because there are no provisions to manage the effects of landslides in this chapter. The potential effects of landslides are addressed in the Glentanner Special Purpose Zone, which is addressed in PC30. I recommend that this part of submission (50.18) is rejected in part.

[5] The New Zealand Building Code (Clause E1.3.2) mandates that buildings be designed to prevent surface water from entering during a one-in-50-year flood event.

129. CRC (via further submission 08.03) and the NHC (29.08) have both sought amendments to the Introduction statement of the NH Chapter. The changes sought by the NHC more clearly describe what each fault hazard overlay represents, and I consider this change will improve the clarity of this statement. However, I agree with the amendments that CRC has sought in its further submission on the NHC submission. The wording is similar to that proposed by NHC, however, it more faithfully reflects the terminology used in the advice provided by Ms Helen Jack that informed this chapter.[6] I therefore recommend that the NHC submission (29.08) is accepted in part.

130. DOC's submission (42.05) on the NH Chapter Introduction statement seeks an amendment to recognise that the effects of natural hazards can also affect the natural environment, and that the effects of natural hazards on the natural environment is a relevant matter to be managed in the MDP. I agree that the effects of natural hazards can impact upon the natural environment. Section 6(h) of the RMA requires persons exercising functions and powers in achieving the purpose of the RMA to recognise and provide for the management of significant risks from natural hazards when seeking to protect natural and physical resources. I consider that the amendment sought by DOC will assist to give effect s6(h) of the RMA, because natural resources include the natural environment. I recommend that DOC's submission (42.05) be accepted.

Recommendation

131. I recommend, for the reasons given above, that the Introduction section of the NH Chapter is amended to:

- Recognise that natural hazard events can affect the natural environment;
- More clearly describe how the faults are mapped; and
- Delete the erroneous reference to the Rural-Urban Interface Overlay.

132. The amendments recommended to the NH Chapter Introduction statement are set out in **Appendix 1** (NH Chapter).

133. The scale of change does not require a section 32AA evaluation because they are minor changes to improve the drafting of the NH Chapter Introduction, and the changes do not alter the general intent of this statement, and therefore the original s32 evaluation still applies.

[6] Appendix 4 to the PC28 Section 32 Report, Part A: Memo to Mackenzie District Council regarding Using Active Fault Information in the Mackenzie District Plan, prepared by H Jack, Environment Canterbury.

Submissions on the NH Chapter Overlays

134. This section addresses the submissions on the overlays proposed to be included in the MDP maps as part of PC28 Part A to manage effects of natural hazards. These overlays, referred to collectively as the NH Overlays, include the:

- Flood Hazard Assessment Overlay;
- Fault Hazard (Critical Infrastructure) Overlay;
- Fault Hazard (Subdivision) Overlay;
- Fault Hazard (Ostler Fault) Overlay; and
- Liquefaction Overlay.

Submissions

135. OWL's submission (64.05) supports the Flood Hazard Assessment Overlay, and the Liquefaction Overlay because these overlays do not extend across the Opuha Dam or the associated hydroelectric power station, and therefore the rules applying to these overlays do not apply to Opuha Dam or the associated hydroelectric power station. OWL also considers it is appropriate that the Flood Hazard Assessment Overlay extends across land adjoining Lake Opuha, so that activities in this area can be appropriately managed to mitigate the risks of flood effects.

136. NHC (29.09) supports the Fault Hazard (Critical Infrastructure) and Fault Hazard (Subdivision) Overlays in part. NHC's submission supports including faults and fault avoidance zones in the MDP, along with provisions to restrict certain development in these areas. NHC's submission notes that the classifications of Fault Hazard (Critical Infrastructure) and Fault Hazard (Subdivision) are not consistent with recommendations from MfE's guidance in Planning for Development of Land on or Close to Active Faults, but that the Council does not have fault maps at a high enough resolution to implement this guidance. NHC's submission seeks that the fault overlays are updated to align with the MfE guidance or any updated guidance, if fault maps of a higher resolution and accuracy are acquired in the future.

137. The FDRRS submission (36.01 and 36.03) opposes the Flood Hazard Assessment Overlay and the Liquefaction Overlay and seeks that these overlays be deleted and that only evidence-based overlays are retained. FDRRS's submission states that the Flood Hazard Assessment Overlay is not based on actual data, and that there is a high degree of uncertainty associated with assumptions behind the modelling used to prepare this overlay. FDRRS is concerned that insurance companies will use the Flood Hazard Assessment Overlay to increase insurance costs. FDRRS also opposes the proposed Liquefaction Overlay because it considers the overlay mapping is not based on real data, and it considers that the existing Liquefaction Overlay is sufficient. CRC's further submission (08.08) opposes this submission (36.01), and notes that these overlays do not map high hazard areas but rather they map areas where further consideration of these two hazards are required if development is proposed.

138. Two submissions from Tekapo Landco Ltd and Godwit Leisure Ltd (09.01 and 09.02) seek site specific amendments to the Liquefaction and Flood Hazard Assessment Overlays mapping. These submissions are considered in Topic 7 of this s42A report.

Analysis

139. I acknowledge OWL's submission in support of the Flood Hazard Assessment Overlay and the Liquefaction Overlay. I note that the methodology used to develop these overlays is based on technical information (refer to the ECan report in Appendix 1 of the PC28 Part A s32 report), and the location of the Opuha Dam and the associated hydroelectric power station was not taken into consideration as part of this mapping. However, OWL is correct that the rules that apply to activities in these overlays will not apply for areas not within the overlays. I therefore recommend that OWL's submission (64.05) is accepted.

140. I do not oppose NHC's submission point (29.09), which seeks that the MDP is updated to include higher resolution mapping of the Fault Hazard (Critical Infrastructure) and Fault Hazard (Subdivision) Overlays if such maps are acquired in the future. However, any changes to the MDP overlay maps will require a separate plan change process. For that reason, I recommend that submission (29.09) is rejected in part, because the relief cannot be implemented via PC28, however it could be implemented in a future plan change.

141. I do not agree with the FDRRS submission on the Flood Hazard Assessment Overlay (36.01). A detailed description of the methodology used by CRC to develop the Flood Hazard Assessment Overlay is provided in the report attached the PC28 Part A Hazards and Risks s32 report as Appendix 1[7]. In brief, the purpose of the Flood Hazard Assessment Overlay is to identify land that *may* be susceptible to flooding, based primarily on topography. The key premise for the mapping is that if the land is relatively flat, then there is generally some potential for flooding to occur, and if it is steep, flooding is generally unlikely. Therefore, the overlay does not identify land that has flooded in the past. This is a different approach to the Operative District Plan, which includes the mapping of some areas known to be susceptible to flooding. The Flood Hazard Assessment Overlay identifies areas where flooding *may* occur and therefore a site specific flood hazard assessment is required to determine if the site is prone to flooding and if so, how the risk of flooding can be mitigated. Undertaking extensive flood hazard modelling for the district to identify high flood hazard areas is cost-prohibitive and the information would become out of date relatively quickly. I therefore consider the proposed Flood Hazard Assessment Overlay, and the approach to managing flooding risks promulgated in PC28, to be appropriate and I recommend that this submission (36.01) be rejected. I am aware that this approach is being used by other District Council's district plans, which are located within the Canterbury Region, such as the Kaikoura District Council, Waitaki District Council (in the Proposed District Plan within the Canterbury Region) and the Selwyn District Council.

142. I do not agree with FDRRS submission on the Liquefaction Overlay (36.03), stating that it should be based on real data. The submission states that the existing liquefaction overlay is sufficient.

[7] PC28 Part A Section 32 report Appendix A: Flood Mapping Mackenzie and Waitaki District Plan Reviews.

There is currently no liquefaction overlay in the MDP. A description of the need for the updated mapping and the methodology used to produce it are described in the report prepared by CRC entitled "Revised Liquefaction Information for Mackenzie District", which is attached to the PC28 Part A Hazards and Risk s32 report as Appendix 5. This report states that the previous mapping of liquefaction susceptibility was undertaken at a broad scale for the District in 2008. Changes to the Building Code to prevent standard foundation options from being used on liquefaction-prone ground came into effect on 29 November 2021. Because of these changes, the existing 2008 liquefaction susceptibility information needed to be revised at a more detailed scale (~1:25,000 or better) to ensure it is accurate enough to incorporate into building consent processes, as well as into the Mackenzie District Plan with accompanying planning provisions.

143. CRC revised the 2008 liquefaction susceptibility areas to a scale of 1:25,000 or better using the latest geological, geomorphological, groundwater, and seismicity information to be consistent with the liquefaction vulnerability class terminology recommended in the 2017 MBIE/MfE guidance, in order to identify where special foundations designs may be required. This revised 'liquefaction damage is possible' area is the Liquefaction Overlay. This revised mapping is used in the building consent process to identify where site-specific geotechnical investigations are required to determine whether enhanced foundations are needed. Via PC28, the Liquefaction Overlay it is proposed to be included in the District Plan so that, at the time of subdivision, a site-specific geotechnical assessment is required which will determine if specific foundation design is needed. This then enables notices to be included on registered titles alerting future landowners of the need for specific foundation design at the time the land is purchased, rather than at the time of building consent. For these reasons, I recommend that the FDRRS submission (36.03) is rejected.

Recommendation

144. I recommend, for the reasons given above, that all the Natural Hazard Overlays are retained as notified, aside from site specific amendments addressed in Topic 7 of the s42A report.

Submissions on the NH Chapter Objectives

Submissions

145. Several submitters support some or all of the NH Chapter objectives and sought that they are retained as notified. OWL (64.06) supports all of the NH Chapter objectives. CRC (50.19) supports NH-O1 and NH-O3. Genesis (46.13, 46.14) supports NH-O1 and NH-O2. Transpower (31.06) supports NH-O2.

146. Meridian (39.09) seeks a new objective be included in the NH Chapter to provide additional objective direction for the management of critical infrastructure where the critical infrastructure may increase risks of natural hazards on people, property and infrastructure. An example where this situation may arise include, for instance, the installation of a bridge that may increase natural hazards risks to property up-stream or downstream of the bridge. The wording sought by Meridian for this objective is to require the new critical infrastructure to

avoid increasing natural hazard risks, and if avoidance is not practicable, that the increase risks are minimized. CRC (08.12) opposes Meridian's submissions (39.09) in its further submission and states that it considers the relief sought is inconsistent with CRPS policy 11.3.4, which requires territorial authorities ensure that new critical infrastructure is located outside known high hazard areas unless there is a reasonable alternative.

147. Meridian's submission on NH-O1 (39.08) states that this objective is not consistent with policy 11.3.4 of the CRPS, as it does not reflect that there may be functional or operational needs for critical infrastructure to be located in specific locations, including locations at risk of natural hazards. Meridian seeks an amendment to objective NH-O1 to exclude this objective from applying to critical infrastructure. Transpower (31.05) considers that the objective directs new National Grid assets to avoid areas where risks are assessed as unacceptable. Transpower seeks an amendment to the objective to recognise the constraints associated with critical infrastructure, and to give effect to policy 11.3.4 of the CRPS and the NPSET.

148. NHC (29.10) supports objective NH-O1 in part and seeks that a new definition of 'unacceptable risk from natural hazards' is included in the MDP to assist with interpretation of this objective. This submission is considered in Topic 1 of this s42A report.

149. Meridian's submission on NH-O2 (39.10) notes that there may be some situations where critical infrastructure will also fit into the definition of major hazard facility. It seeks an amendment to clause 2 of the objective to clarify that this clause does not relate to critical infrastructure that is also defined as a major hazard facility. NHC's submission (29.11) on NH-O2 supports avoiding the development of major hazard facilities, education facilities and accommodation activities in areas at risk from fault rupture (NH-O2(2)). NHC considers that development of healthcare and emergency services facilities, which are included within the definition of 'critical infrastructure', should also be avoided in areas at risk from surface fault rupture (via NH Chapter rules).

150. CRC (50.20) seeks amendments to NH-O2 so that it aligns with proposed policy NH-P8. NH-P8 applies to critical infrastructure located within a fault hazard area and requires that it only locates in the area, if necessary (for functional or operational reasons), and for the infrastructure to be designed to be resilient to the hazard, as far as is possible. The Telcos make a similar submission (35.06). The Telcos submit that the functional and operational needs should be weighed up in any decision, as there are instances where infrastructure may not be able to be located anywhere except within a natural hazard area, and there may be limitations as to how resilient that infrastructure can be to a natural hazard. Functional need and operational need are recognised in policy NH-P5. The Telcos (35.06) have sought amendments to NH-O2 that provide direction at the objective level that aligns with policy NH-P5.

151. NHC's submission (29.12) on NH-O3 supports ensuring that methods to mitigate natural hazard risks do not negatively impact people, property, infrastructure, and the environment. NHC suggests adding an additional clause to this objective to require that natural hazard mitigation measures do not create intolerable residual risk in the event of failure.

152. CRC (50.21) seek an amendment to objective NH-O4 so that this provision enables the development of natural hazard mitigation works and systems. CRC consider that this amendment is required to give effect to CRPS objective 11.2.2 and Policies 11.3.6 and 11.3.7.

Analysis

153. I agree with Meridian (39.08) and Transpower (31.05) that requiring critical infrastructure to avoid areas of high natural hazard risk is more stringent than the direction for managing effects in the NPSET (which does not include policy direction specifically relating to natural hazard resilience) and the CRPS. CRPS policy 11.3.4 states:

> *New critical infrastructure will be located outside high hazard areas unless there is no reasonable alternative. In relation to all areas, critical infrastructure must be designed to maintain, as far as practicable, its integrity and function during natural hazard events.*

154. I also agree with the submissions by Meridian (39.08) and Transpower (31.05) that NH-O1 does not adequately recognise the constraints that can determine where critical infrastructure, including the National Grid infrastructure, need to be located. After considering all of the submissions on NH-O1 and NH-O2, I consider that amending NH-O2 so that it provides a complete objective for managing new critical infrastructure is the most appropriate approach. This requires excluding NH-O1 from applying to critical infrastructure and instead amending NH-O2 to make this the sole objective for managing critical infrastructure. Therefore, I recommend that Meridian's submissions (39.08), which sought that critical infrastructure is excluded from NH-O1 is accepted and that Transpower's submission (31.05) is accepted in part. I discuss other changes that I consider to be necessary to NH-O2, in response to other submissions, below.

155. The new objective for critical infrastructure sought by Meridian (39.09), is:

> ***NH-O1A Critical Infrastructure***
>
> *New subdivision, use and development of land for critical infrastructure avoids increasing the risks of natural hazards to people, property and infrastructure or, where avoidance is not practicable, mitigation measures minimise such risks.*

156. This objective requires new critical infrastructure to not increase risks of natural hazards on people, property and infrastructure, and where this cannot be avoided, for the effects to be minimised. I agree with Meridian that objective direction is necessary to manage the potential for critical infrastructure which may result in increased natural hazard risks on people, property and infrastructure, and that guidance on how these effects are to be managed is required. I have incorporated this relief into the amendments I recommend for NH-O2. I therefore recommend that this submission (39.09) is accepted in part.

157. In relation to Meridian's amendments sought to NH-O2 (39.10), I agree that there may be situations where critical infrastructure also falls into the definition of major hazard facility. NH-O2(2) specifically applies to major hazard facilities. I agree that the clause 2 of NH-O2 will apply

to critical infrastructure that is also a major hazard facility. NH-O2(2) requires major hazard facilities, education facilities or visitor accommodation activities to avoid locating in areas of high natural hazard risk associated with surface fault rupture, where the effects on occupants and neighbours are assessed as being unacceptable. As NHC points out, NH-O2(2) will not apply to healthcare facilities and emergency services facilities, and NHC considers that these activities should have the benefit of this objective, as occupants of these facilities, who are often vulnerable people, may be put at risk.

158. If critical infrastructure is required, for operational reasons, to locate within an area identified as having risk of surface fault rupture, clause 1 of (notified) objective NH-O2 requires the infrastructure to be designed to be resilient to those risks. However, if the critical infrastructure that is also a major hazard facility has staff or occupants, then in my view considering the risks to occupants is appropriate. I also consider that healthcare facilities and emergency services facilities should be afforded the same level of protection. This aligns with policy NH-P8. For these reasons, I recommend that Meridian's submission (39.10) is rejected and NHC's submission (29.11) is accepted. My recommended amendments for this objective are set out in paragraph 162 below.

159. I agree with the submission by CRC (50.20) and the Telcos (35.06) that objective NH-O2 sets a different test than that provided in associated policy NH-P8, which relates to fault hazard areas, as well as NH-P5(4) which relates to high flood hazard areas. Both of these policies provide a pathway to consider critical infrastructure in areas of higher natural hazard risk, provided:

- there is a functional need or operational need to locate in that environment; and
- infrastructure is designed to be resilient to flood hazard as far as is practicable.

160. In order to ensure greater consistency with NH-P5 and NH-P8, and to give effect to CRPS objective 11.2.1[8] and policy 11.3.4, I recommend that CRC's (50.20) and the Telcos submissions (35.06) on NH-O2 are accepted in part.

161. I consider that the title of objective NH-O2 would be clearer if it included reference to 'major hazard facilities', given 'major hazard facilities' are managed via this objective. I consider that this change can be made via clause 16(2).

162. My recommended changes to objective NH-O2, taking account of all submissions on this objective, as well as Meridian's submission (39.09) seeking an additional objective and Transpower's submission on NH-O1 (31.05) is:

> ***NH-O2 Critical Infrastructure, Major Hazard Facilities and Specific Buildings in Natural Hazard Overlays***

[8] CRPS objective 11.2.1: Avoid new subdivision, use and development of land that increases risks associated with natural hazards: New subdivision, use and development of land which increases the risk of natural hazards to people, property and infrastructure is avoided or, where avoidance is not possible, mitigation measures minimise such risks.

1. Critical infrastructure is not located in areas of high natural hazard risk unless there is a functional need or operational need to be at the location;

2. If there is a functional need or operational need to be within areas of high natural hazard risk the critical infrastructure must be ~~and~~ designed to be as resilient to the effects of natural hazards as possible, while achieving the objectives of the critical infrastructure;

3. New critical infrastructure avoids increasing the risks of natural hazards to people, property and infrastructure or, where avoidance is not practicable, mitigation measures minimise such risks; and

~~2~~ 4. Major hazard facilities, healthcare facilities, emergency services facilities, education facilities or visitor accommodation activities avoid locating in areas of high natural hazard risk associated with surface fault rupture where the effects on occupants and neighbours are assessed as being unacceptable.

163. I disagree with the NHC's submission (29.12) on NH-O3. The objective requires methods to mitigate effects of natural hazards to not create *or exacerbate* adverse effects on other people, property infrastructure or the environment. I consider that the objective, as worded with the inclusion of 'exacerbate', could be applied to the consideration of residual risks that may occur in the event of a natural hazard mitigation structure failing. I therefore do not consider this addition to be necessary and I recommend that this submission (29.12) is rejected.

164. I agree with CRC's submission (50.21) on NH-O4 that the objective should enable the development of natural hazard mitigation works and systems. This amendment aligns better with associated policy NH-P6 which is enabling of natural hazard mitigation works, and the associated rule framework. This change gives effect to CRPS objective 11.2.2 and policy 11.3.7, and associated NH Chapter policy NH-P6 and the associated rules. I therefore recommend that this submission (50.21) is accepted.

Recommendation

165. I recommend, for the reasons given above, that objective NH-O1 is amended to exclude critical infrastructure.

166. For the reasons given above, I recommend that objective NH-O2 is amended (as set out in paragraph 162 above), and that objective NH-03 is retained as notified.

167. For the reasons given above, I recommend that objective NH-O4 is amended to enable the development of natural hazard mitigation works to align with the associated provisions in the NH-Chapter which enables these works.

168. The amendments recommended to NH Chapter objectives are set out in **Appendix 1** (NH Chapter).

169. In terms of s32AA, I consider the recommended changes to NH-O1, NH-O2 and NH-O4 are a more appropriate way to give effect to the purpose of the RMA, in particular section 6(h) and section 7(b) which require the management of significant risks from natural hazards and the efficient use of natural and physical resources. The changes give better effect to the CRPS.

Submissions on the NH Chapter Policies

Submissions

170. This section of the s42A report considers the submissions made on the NH Chapter policies. Where a submission point relates to both a NH Chapter policy and the corresponding NH Chapter rule, these submission points are considered together within this section of the report.

171. Submissions supporting the NH Chapter policies and seeking they are retained as notified are set out in Table 3 below:

Table 3: Submissions supporting the NH Chapter policies

Submitter	NH Chapter Policy
NHC (29.13)	NH-P1, NH-P2, NH-P3, NH-P4
OWL (64.06)	NH-P1-NH-P10
CRC (50.23)	NH-P2, NH-P3, NH-P6, NH-P7, NH-P9, NH-P10
NZDF (65.05, 65.06)	NH-P4, NH-P8
Meridian (39.11)	NH-P4 and NH-P5
NZTA (45.02, 45.04)	NH-P4, NH-P8
Genesis (46.15, 46.16, 46.17)	NH-P4, NH-P5 and NH-P8

172. CRC (50.22) seeks an amendment to NH-P1. Policy NH-P1 describes the overlay mapping method used in the MDP to identify areas of natural hazard risk. CRC seeks that reference to the 'natural hazard assessments' method is added to this policy to recognise that this method is also used to identify areas of natural hazard risk, such as the use of flood hazard assessments to identify 'high flood hazard areas'.

173. DOC (42.06) seeks an amendment to NH-P3, which describes the risk-based approach PC28 proposes for managing natural hazard risks, to recognise that natural hazards can also affect the natural environment, which it states is a relevant matter to be managed in the District Plan.

174. Several submitters seek changes to NH-P4, which manages flood hazard risk and sets out how activities within the Flood Hazard Overlay are managed. CRC (50.24) seeks an amendment to clause 3 of the policy to require subdivision, use and development to not increase flood risk on another site. CRC considers that there is a gap in the MDP whereby the MDP does not have the ability to manage activities that may exacerbate flooding on other properties. CRC (50.30) also seeks an additional rule be included in the NH Chapter to give MDC scope to consider activities that may result in the exacerbation of flooding on other properties, in specific circumstances.

175. DOC (42.07) considers that policy NH-P4 would not be effective at managing flood risk on another site, particularly for very large parcels of land or land that does not have a record of title such as public conservation land, rivers, and road reserves. DOC considers that the issue arises through the use of the word 'site' in the policy, and the corresponding NP Standard definition of 'site'.

176. Other submissions on NH-P4 seek changes to align the policy with rule NH-R4. Nova (56.05) seeks an amendment to clause 2 of NH-P4 to include the word 'development' in order to enable the development of 'critical infrastructure', which is provided for as a permitted or restricted discretionary activity, when located within the Flood Hazard Assessment Overlay in rule NH-R4. Transpower's submission (31.07) considers that the policy fails to provide a pathway for new critical infrastructure in the Flood Hazard Assessment Overlay, which differs from the policy direction for critical infrastructure in High Flood Hazard Areas (NH-P5). Transpower (31.07) considers it is necessary to provide a policy pathway to provide for new assets to transmit electricity through areas susceptible to natural hazards, including the Flood Hazard Assessment Overlay, in order to recognise the characteristics, and national significance, of the National Grid and to give effect to the enabling provisions of the NPSET.

177. Submissions seeking changes to policy NH-P5 include:

- NZTA (45.03): amend to include the operation, maintenance, repair, replacement, and upgrading of critical infrastructure where it does not increase flood risk on another site;
- Transpower (31.08) seek to amend to include policy direction for the operation, maintenance, repair, replacement, upgrading of critical infrastructure and, insofar as it relates to the National Grid, give effect to policies 1, 2 and 5 of the NPSET;
- CRC (50.25) seek to amend to manage risks of increasing flood risks on another site; and
- NHC (29.14) seeks to remove duplication of 'subdivision' in clauses 2 and 3 of this policy or clarify differences why subdivision is referred to in both clauses. This submission also seeks that the terminology referring to levels of risk are kept consistent and that a metric is developed to determined 'unacceptable' risk.

178. DOC (42.08) seeks an amendment to policy NH-P6 which provides for natural hazard mitigation works. DOC states that this policy appropriately recognises the need to minimise physical works and engineering interventions. However, DOC considers that it would be helpful to distinguish

that this applies to 'hard' engineering, as 'soft' engineering solutions can be preferable (e.g. opening floodplains, riparian planting, use of wetlands).

179. NHC's (29.15) submission on NH-P7, which manages subdivision, land use and development in areas of fault hazard, supports restricting subdivision, land use and development within the Fault Hazard (Subdivision) Overlay. However, the NHC considers that activities in this overlay should be limited further, because it does not consider that the effects of rupture on a structure can be mitigated. NHC also considers that the management framework for activities within the Ostler Fault Hazard Area Overlay should be strengthened. NHC's submission sets out suggested wording for policy NH-P7. CRC (08.05) opposes this submission because the Fault Hazard (Subdivision) Overlay is a fault awareness overlay, and not a fault avoidance overlay. CRC therefore do not consider it appropriate for buildings to have to avoid locating in the overlay, as there will be areas in the overlay that are not subject to deformation.

180. Transpower's (31.09) submission on policies NH-P7 and NH-P8 seeks amendments to provide clear direction in respect of the management of fault hazard risk for critical infrastructure.

181. In addition to Transpower's submission, three other submitters seek changes to policy NH-P8, which provides policy guidance for critical infrastructure and other specific buildings within a fault hazard area. The NHC (29.16) considers that it is not appropriate to provide for healthcare facilities, emergency services facilities, major hazard facilities, education facilities or visitor accommodation within the Fault Hazard (Critical Infrastructure) Overlay and seeks that these activities are excluded from NH-P8. Meridian (39.12) considers that clause 2(a) of NH-P8 references 'risk' too broadly, and seeks the policy be narrowed to only relate to risks resulting from a surface fault rupture hazard. CRC (50.26) requests that this policy and its associated rule NH-R6 (50.29), are amended to only manage critical infrastructure and major hazard facilities, and not educational facilities and visitor accommodation activities. CRC states that because the Fault Hazard (Critical Infrastructure) Overlay includes all known and suspected faults in the district which includes faults that are only 'possible' faults, it is too stringent to include education facilities and visitor accommodation in these provisions.

182. DOC (42.09) opposes in part wildfire policy NH-P10, as it considers that this policy fails to recognise the role of wilding conifers in wildfire risk. DOC notes that the rules relating to wilding conifers are located in other chapters of the MDP, however it considers that it would be useful to have policy in the NH Chapter to address this matter. CRC's (08.13) further submission supports DOC's submission, as it considers that the proposed change is consistent with other wilding conifer provisions in the MDP and with CRPS policy 5.3.13.

Analysis

183. I agree with CRC's submission (50.22) seeking to amend NH-P1. The flood hazard assessment method is a key component of the approach to managing the risks of flooding promulgated in PC28, and is required by rules NH-R1, NH-R2 and NH-R4 to determine if a site is a High Flood Hazard Area. Recognising that natural hazard assessments is a method used in the NH Chapter rules in policy NH-P1 as a means of identifying areas of natural hazard risk is the most

appropriate way to achieve objective NH-O1, which seeks to ensure that development is avoided in areas where the risks from natural hazards are unacceptable. I therefore recommend that this submission is accepted.

184. Policy NH-P3 provides direction on how activities that are located within the Flood Hazard Assessment Overlay, and are *not* High Flood Hazard Areas, are to be managed. NH-P3 describes the risk-based approach the MDP is implementing for managing natural hazard risks. It identifies that this approach is adopted to manage the risk to people and property. DOC's submission (42.06) on NH-P3 seeks recognition that natural hazards can also affect the natural environment, which is a relevant matter to be managed in the District Plan. I agree that there may be situations where the wider environment (that is not people and property) may be impacted by a natural hazard event. Examples could include a flood event impacting on the habitat of the Black-fronted terns on the Ōhau River. I agree that there may be some developments, such as subdivision, that may exacerbate the natural hazards risks impacting the natural environment and that this should be taken into consideration at the time of development. For that reason, I consider that the amendment sought by DOC to NH-P3 is the most appropriate way to achieve NH-O1. I recommend that this submission (42.06) be accepted.

185. CRC (50.24) considers that there is a gap in the MDP resulting in the Council not having the ability to manage activities that may exacerbate flooding on other properties, which it considers should be corrected via an amendment to NH-P4 and a new rule. Clause 3 of policy NH-P4 enables new subdivision, use and development only where every new natural hazard sensitive building has an appropriate floor level above the 500 year ARI design flood level. This policy aligns with permitted activity rule NH-R1, which provides for new natural hazard sensitive buildings, and rule NH-R2 which provides for extensions to buildings, provided the specified finished floor level is achieved, or the extension is less than 25m^2. For a new natural hazard sensitive building that does not achieve condition 3 of rule NH-R1 or condition 2 of rule NH-R2 (the finished floor level is not achieved for a new, or extensions to a natural hazard sensitive building) then policy NH-P4(3) will be relevant to the consideration of the restricted discretionary resource consent application. Policy NH-P4(3) will also be relevant to a subdivision application, which is a restricted discretionary activity under rule SUB-R7B because it is not in a High Flood Hazard Area.

186. CRCs requested addition to this policy does not align with the NH Chapter rule framework. Therefore, CRC (50.30) has sought that an additional rule be included in the NH Chapter to give MDC scope to manage activities that may result in the exacerbation of flooding on other properties, in specific circumstances. The new rule sought would apply to all earthworks, new buildings and structures located within the Flood Hazard Assessment Overlay. It would provide for these activities as a permitted activity provided it can be demonstrated that flooding will not be worsened on another property through the diversion or displacement of floodwaters. I acknowledge that this issue is challenging to manage because district plans manage earthworks, buildings and structures, all of which can cause the displacement of floodwaters. However, complying with this rule will impose an expensive requirement that will apply to a very wide range of activities in the District. In practice, this rule would require anyone undertaking

earthworks or erecting a new building or structure, within the Flood Hazard Assessment Overlay, to engage a technical expert to advise whether or not the works will worsen flooding on another property. Such an assessment may require modelling of potential flood flows and proposed developments, which is not realistically available to most landowners wanting to carry out what could be small scale developments on their land. I also do not consider it reasonable to expect the planners at MDC to determine compliance with this rule without expert advice. I consider this approach to be a highly inefficient method to achieve the outcome.

187. Further, I do not consider that there is a gap in the planning documents to manage the potential for off-site flooding effects. This issue is appropriately addressed in the regional plans administered by CRC, which manage the diversion of water (under section 14 and section 30 of the RMA). Section 14(3)(a) states that a person can only divert water if expressly allowed by a national environmental standard, a rule in a regional plan or proposed regional plan or a resource consent. Rule 5.6 of the Canterbury Land and Water Regional Plan (CLWRP) requires discretionary resource consent for the diversion of floodwaters. If CRC consider that the CLWRP does not adequately manage this issue, then in my view this issue should be resolved via an amendment to the CLWRP. In addition, clause E1 – Surface water of the New Zealand Building Code (Building Regulations 1992, Schedule 1) contains requirements regarding buildings and sitework (including earthworks) in relation to managing surface water and effects on other property.

188. I am aware that some other District Councils within the Canterbury Region have included/proposed to include a rule similar to that sought by CRC in their District Plans. Careful consideration of whether or not to include this rule was undertaken through the drafting of the NH Chapter provisions, based on feedback received from CRC on the draft chapter. The Mackenzie District Councillor's also carefully considered this new rule prior to the notification of PC28, and decided against its inclusion. I agree with this decision as I consider that the RMA is clear in directing regional plans to manage water diversion, and the rule sought by CRC will create uncertainty as it will be difficult and expensive to demonstrate compliance with.

189. However, in order to assist both CRC and MDC with managing this issue, I consider that a sentence should be added to the Introduction of the NH Chapter to advise plan users that activities which divert water, including floodwaters, may require resource consent under the CLWRP. In addition, the NH Chapter includes several other policies that require works not to exacerbate natural hazard risks or flood risks on other properties (NH-O3, NH-P4, NH-P5). I therefore recommend that CRC's submission (50.24 and 50.30) on NH-P4 and the associated additional rule are accepted in part.

190. DOC (42.07) is concerned that policy NH-P4 would not be effective at preventing flood risk on another site for land which is in very large titles or does not have a title (e.g. public conservation land, rivers, and road reserves), because the definition of 'site' does not always capture these properties. DOC has sought the word 'site' is replaced with 'location' in this policy. The MDP definition of 'site' is from the NP Standard. 'Site' is defined to include an area of land comprised in a single record of title under the Land Transfer Act 2017 or an area of land which comprises

two or more adjoining legally defined allotments in such a way that the allotments cannot be dealt with separately without the prior consent of the council.[9] I agree with DOC that the definition of 'site' does exclude land which does not have a registered title. I do not consider the amendment DOC has suggested is workable, because the word 'location' in this context is too ambiguous. I consider that this issue can be addressed by adding the words 'or property' in clauses 1 and 2 of this policy as set out below:

> ***NH-P4 Flood Hazards***
>
> *Within the Flood Hazard Assessment Overlay ~~Area~~ (except High Flood Hazard Areas), enable:*
>
> > *1. new non critical infrastructure, or the operation, maintenance, repair, replacement, upgrading of non critical infrastructure where the infrastructure does not increase flood risk on another site or property;*
> >
> > *2. the development, operation, maintenance, repair, replacement, upgrading of critical infrastructure where the infrastructure does not increase flood risk on another site or property; and …*

191. I recommend that DOCs submission (42.07) is accepted in part. I also note that the word 'area' is not needed in the policy chapeau, and I recommend that this is deleted using clause 16(2).

192. I agree with Nova (56.05) and Transpower (31.07) that policy NH-P4 fails to provide a clear policy pathway for new critical infrastructure in the Flood Hazard Assessment Overlay, and that this policy pathway is required. I agree that the linear nature of the National Grid and other lines infrastructure means that it is not possible for the National Grid to avoid locating in areas vulnerable to natural hazard. It is not the intention of NH-P4 to restrict the development of critical infrastructure in the Flood Hazard Assessment Overlay (where it is not a High Flood Hazard Area). I consider that amending the policy to provide a pathway for new critical infrastructure where it is within the Flood Hazard Assessment Overlay will give effect to CRPS Policy 11.2.3 and is the most appropriate way to achieve NH-O2. I prefer the wording suggested by Nova and I therefore recommend that Nova's submission (56.05) is accepted and Transpower's submission (31.07) is accepted in part.

193. Policy NH-P5 provides directive guidance for activities within High Flood Hazard Areas. As NHC's submission points out, 'subdivision' is referred to in both clause 2 and 3 of NH-P5. Clause 3 is intended to manage subdivision where no change of land use or potential development is associated with the subdivision, such as boundary adjustments. However, it will also be applied to subdivisions which do enable development of non-natural hazard sensitive buildings. Clause 2 is intended to guide the condition of subdivision where new natural hazard sensitive buildings would be enabled. Therefore, I do not consider the inclusion of 'subdivision' in both clause 2 and 3 is an error and I recommend that this submission is rejected. NHC's submission point

[9] The definition of 'site' also includes land contained in an approved survey plan and unit title land.

seeking the use of a metric and the definition of unacceptable risk is addressed in Topic 1 of this s42A report.

194. Transpower's (31.08) and NZTA's (45.03) submissions on NH-P5 seek amendments to provide a policy pathway for the operation, maintenance, repair, replacement, and upgrading of critical infrastructure, where these activities do not increase flood risk on another site. The operation, maintenance, repair, replacement, upgrading of critical infrastructure is provided for as a permitted activity within the Flood Hazard Assessment Overlay provided the activity does not raise the ground level (rule NH-R3). This rule applies to areas that are High Flood Hazard Areas, which will also be in the Flood Hazard Assessment Overlay. I agree that, for works on existing critical infrastructure where the ground level is raised, then a resource consent is required. In this situation, determining whether or not the site is a High Flood Hazard Area is likely to be required in order to assess the effects of the proposal. I agree that providing additional policy guidance for operation, maintenance, repair, replacement, and upgrading of critical infrastructure where the site is a High Flood Hazard Area would be helpful. I therefore recommend that NZTA's (45.03) and Transpower's (31.08) submissions are accepted in part via a new recommended policy in the NH Chapter[10], as I consider this change be the most appropriate way to achieve objectives NH-O2.

195. I do not consider that the amendment sought by DOC (42.08) to policy NH-P6(1) is necessary. Clause 1 of this policy states "*approaches to risk management that reduce the need for physical works and engineering interventions*". I consider that the wording of policy NH-P6(1), which refers to 'works and engineering interventions' makes it clear that this policy is managing the effects of hard engineering solutions. I also consider that the use of the term 'hard engineering' may cause confusion. However, my recommendation in response to CRC's submission (50.28) on rule NH-R5 provides a permitted activity pathway for soft engineering natural hazard mitigation works. I consider that this recommended change will address DOC's submission in part. I therefore recommend that this submission (42.08) is rejected in part.

196. Policy NH-P7 sets out how the risks associated with building within the fault hazard overlays are managed, and it includes policy direction for activities located within the Fault Hazard (Subdivision) Overlay and separate guidance for activities locating in the Ostler Fault Hazard Area Overlay. The NHC's submission (29.15) on this policy seeks additional restrictions in this policy because it does not consider that buildings can be designed to withstand a fault rupture event. It seeks that development is avoided in the Fault Hazard (Subdivision) Overlay and the Ostler Fault Hazard Overlay. I do not consider that additional restrictions are necessary. The Fault Hazard (Subdivision) Overlay is not a fault avoidance zone, rather it is a fault awareness area (mapped at 1:250,000).[11] Rule SUB-R7A in the SUB Chapter requires applicants proposing subdivision within the Fault Hazard (Subdivision) Overlay to map the zone of deformation to a

[10] The suggested wording I have recommended to give effect to this relief differs slightly from the wording sought by Transpower.

[11] Section 2.2 of the CRC Memo to Mackenzie District Council Regarding Using Active Fault Information in the Mackenzie District Plan, attached as Appendix 4 to the s32 Report for PC28 Part A, discusses fault awareness areas.

scale of 1:35,000 or better and then avoid building within the area subject to fault deformation by setting buildings back 20m from the deformation zone. It is therefore inappropriate to include the word "avoid" in policy NH-P7(1) as there may well be areas within the overlay that, when assessed, are not subject to fault deformation and which can be built on.

197. I also do not consider that the NHC's amendment to clause 2 of this policy, which relates to the Oster Fault Hazard Overlay, is necessary. In its further submission, CRC state that it would be preferable to avoid building in the Ostler Fault Hazard Overlay area. CRC's further submission also considers that for reverse (thrust) faults, such as the Ostler Fault, deformation varies from distinct several metre high scarps to more gentle tilting. Therefore, in some areas the fault rupture hazard can be effectively mitigated by design that can withstand some degree of tilting. CRC (08.05) also note in its further submission that past deformation associated with the Ostler Fault has been mapped in detail and future deformation can be predicted with some confidence, meaning that a blanket requirement to avoid development in the overlay is not justified and rather a case by case approach is appropriate. For these reasons, I consider that the notified wording of policy NH-P7(2) is appropriate to achieve NH-O1 and NH-O3, and I recommend that NHC's submission on NH-P7 (29.15) is rejected.

198. Transpower' submission (31.09) on NH-P7 and NH-P8 seeks greater clarification about which policy is relevant to the consideration of critical infrastructure, and seeks that critical infrastructure is excluded from NH-P7, which would direct plan users to policy NH-P8. The matters contained in NH-P8(1) are specifically relevant to the management of critical infrastructure within the Fault Hazard (Critical Infrastructure) Overlay. This is the intention of these policies, and therefore I agree that additional clarification would assist to clarify which policy is relevant to the consideration of critical infrastructure. I consider that this amendment will improve the efficient implementation of the MDP, and therefore I recommend that this submission (31.09) is accepted in part. My recommended amendment is to include the words "except as provided or by policy NH-P8" to make it clear that this is the policy that manages critical infrastructure in relation to fault hazard risk.

199. I do not agree with Transpower's (31.09) submission on NH-P8, which seeks to delete 'critical infrastructure' from clause 2 of this policy. Clause 2 relates to buildings that accommodate groups of people as well as buildings required for critical infrastructure. It requires that buildings are designed to manage the risks to people and property, and buildings on adjoining sites, to an acceptable level. If critical infrastructure is required to establish a building where people operating the critical infrastructure are located, then I consider it is important that the building is designed to manage the risks to people and property, for their health and safety and to ensure the resilience of the critical infrastructure. I recommend that Transpower's submission on NH-P8 (39.09) is rejected.

200. CRC's (50.26) submission on NH-P8 seeks that educational facilities and visitor accommodation activities are removed from NH-P8 (and associated rule NH-R6) because this overlay includes faults that are only 'possible' faults, and therefore it considers that this management approach is overly stringent for education facilities and visitor accommodation. CRC consider that it

would be more appropriate to require new education facilities and visitor accommodation to undertake site- specific investigations to determine the location of fault deformation, and set back from that, within the Fault Hazard (Subdivision) Overlay, similar to rule SUB-R7A. The Fault Hazard (Subdivision) Overlay is a subset of the Fault Hazard (Critical Infrastructure) Overlay that only includes the more active faults, and the faults that CRC are more certain are actually faults. CRC are the technical advisors for the MDPR for fault hazard matters, and I have discussed this submission with CRC. The MfE guidelines for the development of land on or close to active faults[12] states that educational facilities and visitor accommodation should avoid faults with a recurrence interval of less than 10,000 years. The Fault Hazard (Subdivision) Overlay only includes faults with recurrence intervals of less than 5000 years, and the Fault Hazard (Critical Infrastructure) Overlay includes several faults with recurrence intervals of more than 10,000 years, so education facilities and visitor accommodation fall in between these. Given the rule framework for managing educational facilities and visitor accommodation only applies a restricted discretionary activity status to these activities if they are within the Fault Hazard (Critical Infrastructure) Overlay, I consider that the notified rule and associated policy NH-P8 is appropriate. I consider it important that the development of new education facilities and visitor accommodation are made aware of the possible fault hazard risks. I recommend that CRC's submission (50.26) is rejected.[13]

201. The NHC (29.16) seeks amendments to NH-P8 and its associated rule NH-R6 to prevent activities that accommodate vulnerable people from locating in the Fault Hazard (Critical Infrastructure) Overlay. This overlay covers all areas of all known faults, whether they are definite, likely or possible, it therefore covers the largest area of the three fault hazard overlays. The NHC's submission on NH-P8 seeks that healthcare facilities, emergency services facilities, major hazard facilities, education facilities or visitor accommodation should not be allowed to locate within the Fault Hazard (Critical Infrastructure) Overlay, and it seeks the deletion of these activities from policy NH-P8 and rule NH-R6. The inclusion of these activities in the provisions (NH-P8 and NH-R6) is the mechanism used to ensure the risks of locating these activities in the fault hazard areas are identified. If these activities are not included in NH-R6 and NH-P8 then there would be no means of managing the risks of fault rupture on these activities. The inclusion of activities such as healthcare facilities education facilities and visitor accommodation are included *because* these activities accommodate vulnerable people or are required to function through a natural hazard event, and they therefore require additional requirements or consideration of the fault hazard. Without the provisions, the fault hazard overlay might not be drawn to their attention. For these reasons, I recommend that the NHC submission (29.16) on policy NH-P8 is rejected.

202. In relation to policy NH-P10, while I do not disagree with DOC that wilding conifers contribute to the wildfire risk in the District, there are no rules in the NH Chapter to manage the planting of wilding pines. This resource management issue is managed via the provisions in the GRUZ Chapter of the MDP. Including a policy that manages wilding pines within the NH Chapter would

[12] MFE Planning for Development of Land on or Close to Active Faults, May 2003, pages 21 and 22.
[13] I have discussed this with Ms H Jack of CRC, and she supports this approach.

not be consistent with the framework of the MDP because there is no linear connection to the rules in the NH Chapter. Therefore, I recommend that DOC's submission (42.09) on NH-P10 be rejected because the provisions that manage wilding pines are contained within the GRUZ Chapter of the MDP.

Recommendation

203. I recommend that, for the reasons given above, NH-P1 is amended to refer to 'natural hazard assessments' for the identification of natural hazards, and that NH-P3 is amended to recognise that natural hazard events can have consequences for the wider environment, as well as for people, communities, property and infrastructure.

204. I recommend, for the reasons given above that NH-P4 is amended to provide for the development of critical infrastructure within the Flood Hazard Assessment Overlay (and outside High Flood Hazard Areas), to better align with the rule framework, and to include reference to 'property' to better manage potential flood effects on land that falls outside the definition of site.

205. I recommend for the reasons given above, that a new policy is inserted before NH-P5 is to provide policy guidance for the operation, maintenance, repair, replacement, upgrading of critical infrastructure within a High Flood Hazard Area.

206. I recommend, for the reasons given above, that NH-P7 is amended is amended to make it clear that this policy is not relevant to critical infrastructure.

207. I recommended, for the reason given above, that policies NH-P6, NH-P8 and NH-P10 are retained as notified.

208. The amendments recommended to NH Chapter policies and rule NH-R5 are set out in **Appendix 1**.

209. The scale of changes recommended to NH-P1, NH-P3, NH-P4, the new policy before NH-P5 and NH-P7 do not require a section 32AA evaluation because the changes are minor and serve to better align the policies with the associated rule framework or improve the efficient administration of the MDP by improving clarity of the provisions. Therefore, the original s32 evaluation remains relevant. The change to NH-P10 to recognise that wilding conifers contribute to wildfire spread is the most appropriate way to achieve Strategic Directions objective ACT-O5 and NH Chapter objective NH-O1.

Submissions on the NH Chapter Rules, Standards and Matters of Discretion

Submissions

210. This section of the s42A report considers the submissions made on the NH Chapter rules, standards and matters of discretion. There are instances where the submissions on the rules have been addressed elsewhere in this s42A report. These include CRC submission seeking a

new rule to manage the potential for floodwater diversion (submission 50.30), and CRC submission (50.29) on rule NH-R6 in relation to how education facilities and visitor accommodation are managed.

211. Submissions supporting the NH Chapter rules and seeking they are retained as notified are set out in Table 4 below:

Table 4: Supporting Submissions

Submitter	NH Chapter Policy
NHC (29.17, 29.20)	NH-R2, NH-R7, NH-R9
CRC (50.27, 50.31, 50.32)	NH-R1-R4, NH-R7- R9, NH-R10, NH-S1, NH-MD1
OWL (64.07, 64.09, 64.11)	NH-R1-R2, NH-R4, NH-S1, NH-MD1-MD2, SCHED-NH1.
Fuel Companies (01.03)	NH-R1-R2
The Telcos (35.07)	NH-R3
Transpower (31.10)	NH-R4
Meridian (39.13)	NH-R4
Genesis (46.18, 46.19, 46.20)	NH-R3, NH-R4, NH-R6

212. OWL (64.08) generally supports NH-R3 and seeks minor drafting changes to the title of Rule NH-R3, to add 'or' in front of 'upgrading' in this title.

213. The NHC submission on NH-R4 (29.18) and NH-R6 (29.19) supports these rules, which provides a restricted discretionary activity status for critical infrastructure within a High Flood Hazard Area (NH-R4) and infrastructure, education facilities and visitor accommodation activities or extensions to existing critical infrastructure and major hazard facilities, education facilities and visitor accommodation activities in the Fault Hazard (Critical Infrastructure) Overlay (NH-R6). NHC (29.18 and 29.19) seeks additional clarification on what '*appropriate measures that have been incorporated into the design to provide for the continued operation of the infrastructure*' entails, as this is a matter of discretion for both rules.

214. The Telcos submissions on NH-R4, NH-R6 and NH-R8 (35.08, 35.09 and 35.10) seeks that telecommunications networks are excluded from these rules, which apply to critical infrastructure. The relief aligns with its submission to remove telecommunications networks from the definition of critical infrastructure.

215. Rule NH-R5 provides for natural hazard mitigation works. Submissions on rule NH-R5 were made by:

- OWL (64.10), which seeks that the permitted activity status for the upgrading of existing natural hazard mitigation works be extended to works undertaken by a critical infrastructure operator; and

- CRC (50.28), which seeks the rule is amended to make the drafting clearer and to provide for the establishment of new natural hazard mitigation works as a permitted activity if the works are undertaken by CRC. Related submission by CRC (50.33) seeks the deletion of NH-MD2.

216. Rule NH-R6 provides for new critical infrastructure and major hazard facilities, amongst other activities, as a restricted discretionary activity when located within the Fault Hazard (Critical Infrastructure) Overlay. Transpower (31.11) and Meridian (39.14) seek that the positive effects of these activities be taken into consideration by adding a new matter of discretion for the positive effects of the proposal.

217. Meridian's submission on rule NH-R8 (39.15) notes that the Fault Hazard (Critical Infrastructure) Overlay lies over part of the area that is also covered by the Ostler Fault Hazard Area Overlay. Meridian request that NH-R8 be amended so it is clear that critical infrastructure is not regulated by NH-R8, rather NH-R6 is the relevant rule.

218. NZDF's (65.07) submission on standard NH-S1, which is the standard that triggers the requirement to obtain a flood hazard assessment, seeks that the assessment be valid for five years as opposed to three years, and that there is an ability to obtain a site wide flood hazard assessment. NZDF states that a site wide flood hazard assessment would be beneficial for larger sites where there may be ongoing development or multiple activities, thus avoiding an ad hoc approach to individual building projects. It considers that a note clarifying this point would provide additional clarity to plan users while reducing the administrative and cost burden in obtaining individual assessments. CRC's further submission (08.15) supports this submission in part, agreeing that the ability to do site-wide flood hazard assessments may be necessary in some situations. However, CRC note that because flood levels across a site vary, the location of buildings on the site would need to be provided, and it notes that the assessor should have the decision over whether a site wide assessment is appropriate. CRC have provided wording for a note to be included in this standard to provide for site wide assessments in its further submission.

219. FDRRS (36.02) in relation to NH-S1, seek alternatives to the minimum floor level methods be considered for managing the potential risks of floodwaters inundating buildings.

220. The NHC's submissions on matter of discretion NH-MD2 (29.21) seeks clarification of the meaning of 'unacceptable risks' in the context of these provisions.

221. FDRRS's (36.06) submission opposes in part the provisions proposed to assist with managing wildfire spread. The submitter considers that, rather than imposing controls via the MDP, that Council could implement public education, targeting local landscaping businesses and nurseries to assist with managing this risk. CRC opposes this submission in its further submission (08.09), stating that it considers the inclusion of the proposed provisions in the MDP is likely to achieve better outcomes than public education alone.

222. Submitter Susan Allen (52.02) supports the proposed provisions to assist with managing wildfire spread. However, the submitter is concerned that freedom camping at Edwards Stream is not managed to assist with the prevention of wildfire spread, and that better management of freedom campers is required to give effect to proposed Natural Hazard objective NH-O2 and policy NH-P1.

Analysis

223. I do not agree that the minor drafting change sought by OWL to the title of NH-R3 is necessary. I consider that it is clear what activities this rule provides for. I recommend that this submission (64.08) is rejected.

224. The Teleco's submissions on rule NH-R4, NH-R6 and NH-R8 are not required because I have recommended 'telecommunications networks' are deleted from the definition of critical infrastructure. I therefore recommend that these submissions (35.08, 35.09 and 35.10) are accepted in part.

225. I do not consider that the relief sought by NHC on rule NH-R4 is necessary. The range of measures that could be utilised by different critical infrastructure providers for different types of critical infrastructure to demonstrate how the design of the infrastructure provides for the continued operation of the infrastructure, is infinite. I consider the outcome sought by this matter of discretion is clear and will require applicants to demonstrate how the infrastructure proposed is resilient in a flood event is managed. I recommend that this submission (29.18) is rejected.

226. In relation to NHC's submission on NH-R6 (29.19), I consider that matter of discretion (b), to enable the consideration of 'appropriate measures that have been incorporated into the design to provide for the continued operation of the infrastructure', could be clarified to link the measure specifically to managing the risks of fault rupture. I consider the same amendment would assist with the implementation of matter of discretion (d)(i) which states (with my recommended amendment underlined): 'risks to the structural integrity of the critical infrastructure, major hazard facility, education facility or visitor accommodation activities can be appropriately managed <u>in a fault rupture event.</u>' I consider these amendments will assist with the efficient administration of the MDP. I recommended that this NHC's submission (29.19) is accepted in part.

227. I do not agree with the OWL submission on NH-R5 (64.10), which seeks the rule is amended to provide for new natural hazard mitigation works to be undertaken by a critical infrastructure

provider as a permitted activity. Natural hazard mitigation works could be a broad range of activities, including building stop banks, defences against water and structures or works to manage rockfall risk or erosion. These works require careful engineering design and management to ensure they are effective at managing the natural hazard risks while not increasing risks at another site. Natural hazard mitigation works are typically undertaken by regional councils and territorial authorities. However, they can also be undertaken by landowners and developers. In the event that a critical infrastructure provider, or a developer, proposes to establish a new natural hazard mitigation works, then I consider the appropriate activity status for this activity is discretionary in order to enable full consideration of the range of environmental effects that the activity may generate. I therefore recommend that the OWL submission (64.10) on NH-R5 is rejected.

228. The submission by CRC on rule NH-R5 (50.28) seeks to amend the rule to provide for new natural hazard mitigation works as a permitted activity, if the works are undertaken by the regional council or a territorial authority. CRC's associated submission (50.33) seeks the deletion of the matters of discretion that apply to this rule (NH-MD2). These amendments would enable CRC or a territorial authority to undertake any natural hazard mitigation work without the need for a resource consent. I understand that natural hazard mitigation works undertaken by regional and territorial authorities provide community benefits. However, the range of solutions that could be employed is infinite and, in my view, it is not possible to anticipate the range of environmental effects that such works may generate. However, I consider that a permitted activity status is appropriate for soft engineering solutions used for natural hazard mitigation works. These works could include the use of natural materials, features and processes, including vegetation to stabilise waterway banks and reduce erosion and inundation. Soft engineering techniques would include planting, bank re-profiling and the restoration of natural features such as wetlands and floodplains.

229. In addition, I consider that there is some conflict between the management of significant risks from natural hazards and other RMA Part 2 matters. Such as providing for the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga, protecting outstanding natural landscapes (**ONL**) /features (**ONF**), protecting significant historic heritage and the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna. I therefore consider that the restricted discretionary activity status for natural hazard mitigation works is appropriate in certain sensitive locations.

230. I note that District Wide provisions in the HH Chapter, TREE Chapter and Section 19 Ecosystem and Indigenous Biodiversity will also apply to natural hazard mitigation works, and I consider these provisions to be appropriate to manage potential effects on the items, trees and vegetation. The SASM Chapter and the Natural Features and Landscape Chapters of the MDP do not include rules that would trigger the need for a resource consent for natural hazard mitigation works within a mapped SASM area or an ONL/ONF. Therefore, while I agree that a permitted activity status is appropriate in certain locations, I consider that an exemption is needed so that new natural hazard mitigation works are a restricted discretionary activity within areas identified as SASMs, ONLs and ONFs.

231. I therefore recommend that CRC's submission 50.28 is accepted in part, and my recommended drafting for an additional clause in permitted activity rule NH-R5 is set out below. I note that some consequential amendments are required to other parts of NH-R5, and I have included these changes in the updated NH Chapter in **Appendix 1**. I recommend that submission 50.33 is rejected in part, because the matters of discretion in NH-MD2 will remain applicable for the consideration of natural hazard mitigation works that are a restricted discretionary activity under this rule.

232. I agree in part with the change sought by CRC to the Note in rule NH-R5, which would exempt natural hazard mitigation works undertaken under this rule from complying with any other rules in the District Plan. As notified, this Note exempts the maintenance or operation of any existing natural hazard mitigation works from the Earthworks Chapter provisions. As discussed above, the provisions in the District Wide Chapters, such as the TREE Chapter and the HH Chapter apply to natural hazard mitigation works. In my view, it is appropriate for the District Wide chapters to apply to natural hazard mitigation works. If the works require the relocation of a heritage item, for instance, the effects of the activity can be considered via a resource consent process. I also consider it appropriate that the provisions in Section 19 Ecosystem and Indigenous Biodiversity apply to these works, in order to give effect to the NPS-IB. However, I consider that this note should be amended so that it applies to all of the natural hazard mitigation works permitted in rule NH-R5, and not just the maintenance or operation of existing natural hazard mitigation works, so as not to frustrate the purpose of this permitted activity rule. Therefore, I recommend that the part of CRC submission (50.28) that seeks changes to the Note in NH-R5 is accepted in part.

233. I agree with Transpower's (31.11) and Meridian's (39.14) submissions on NH-R6 to allow for the positive effects of these activities to be taken into consideration by adding a new matter of discretion for the positive effects of proposals. I consider this additional matter of discretion will be the most appropriate way to achieve Strategic Directions objective ATC-O3, which requires that the importance of infrastructure to the District is recognised and provided for, and that critical infrastructure is as resilient as possible to the risks of natural hazards (NH-O2). I recommend that these submissions (31.11 and 39.14) be accepted.

234. I recommend that Meridian's (39.15) submission on NH-R8 be accepted. The Fault Hazard (Critical Infrastructure) Overlay intentionally covers the Ostler Fault Hazard Area Overlay, however rule NH-R8 is not intended to apply to critical infrastructure. I therefore consider that the amendment sought to rule NH-R8, to exclude critical infrastructure provided for by rule NH-R6 from NH-R8, will assist with the efficient administration of the MDP. I recommend that this submission (39.15) is accepted.

235. I recommend that NZDF's submission (65.07) on NH-S1 seeking the ability to obtain site-wide flood hazard assessments to avoid a piecemeal approach to flood hazard management is accepted. I consider this approach to be more efficient than requiring individual flood hazard assessment for each building that may be proposed. I therefore recommend that this submission is accepted in part. I recommend that a note is included in standard NH-S1 that

states that a flood hazard assessment can either be sought on an individual project basis or on a site-wide basis, as determined by the person undertaking the assessment. Standard NH-S1 specifies that the assessor must be a person or organisation that has been certified by the Mackenzie District Council as being suitably qualified and experienced, or CRC.

236. In relation to the NZDF's submission (65.07) seeking that the flood hazard assessment are valid for five years, the benefit of having the assessment valid for 3 years is that it will remain current, reducing the risks of buildings being built on out of date information. The risks with a 3 year shelf-life is that, for projects with a long lead in time, the flood assessment may expire prior to building consent for the building being sought. This could add costs to a project if the updated flood assessment establishes a different freeboard and re-design works are required. I therefore consider it reasonable for the flood hazard assessments to be valid for 5 years. I recommend that the submission point (65.07) seeking the flood hazard assessment are valid for five years is accepted, and the submission point relating to site-wide flood hazard assessments is accepted.

237. I understand that the FDRRS submission (36.02) on standard NH-S1 is not disputing the 300mm freeboard requirement in this standard but rather is suggesting that alternative forms of mitigation of flood hazard effects should be permitted in some circumstances. Raising floor levels 300 mm above the 500 year ARI flood level is permitted (as this is the preferred approach to mitigate the potential effects of flooding). However, in situations where alternative mitigation options are available, other mitigation options can be employed. Their suitability and effectiveness will need to be assessed through a resource consent application process. I do not recommend any changes to NH-S1 in response to this submission because I consider that alternative mitigation would be site specific and would need to be considered on a case by case basis (and therefore, through a resource consent process). I recommend that the submission (36.02) is rejected in part.

238. My analysis of the NHC's submission on NH-MD2 (29.21) seeking further clarification of 'unacceptable risk' and the use of a metric to assist with determining what might be unacceptable in any one situation is addressed in Topic 1 of the s42A report. For the reasons I have set out in Topic 1 of the s42A report, I do not agree with this submission, and I recommend it (29.21) is rejected.

239. While I agree that public education would assist with implementing actions to manage wildfire spread, I agree with CRC that the inclusion of the proposed provision is likely to achieve a better outcome than public education alone. Proposed rule NH-R10 does not require any landowner to undertake planting of their properties. Rather, the proposed rule states that, if boundary planting is undertaken at the urban-rural interface, then non-flammable plants must be used. I consider this rule to provide an appropriate level of control that will assist with the management of wildfire spread at the urban-rural interface. I therefore recommend that the FDRRS submission (36.06) is rejected.

240. Edwards Stream freedom camping site is located adjacent to State Highway 8 between Takapō and Burkes Pass. The site is within the GRUZ and Camping Grounds are a permitted activity in this zone where they are provided for within a Reserve Management Plan, approved under the Reserves Act 1977 (rule GRUZ-R11).

241. Proposed rule NH-R10 only applies at the interface of urban and rural zones. The rule will not apply to land at or adjacent to the freedom camping area at Edwards Stream. The freedom camping areas in Mackenzie District are provided for via the Responsible Freedom Camping Bylaw 2023. Open fires and fire pits are prohibited at the freedom camping sites under this bylaw.

242. I do not consider that amending rule NH-R10 so that it applies to the freedom camping area at Edwards Stream is the most appropriate way to achieve the Natural Hazard objectives as the activity is managed by the specific Council Bylaw which establishes a more robust prohibition of open fires at the site. I recommend that this submission (52.02) is rejected.

Recommendation

243. I recommend, for the reasons given above, that rule NH-R5, and the associated Note, is amended to provide for soft engineering natural hazard mitigation works as a permitted activity outside of SASM, ONL and ONF locations, and when undertaken by a territorial authority of Regional Council, to better provide for the management of natural hazard risks. This amendment also requires a new definition for 'soft engineering natural hazard works' to be included in the Definition Chapter. The additional clause I recommend for rule NH-R5 is:

> *3. New natural hazard mitigation works administered by a Regional Council or Territorial Authority provided:*
>
> *a. the works are outside of an area identified as SASM, ONL or ONF; and*
>
> *b. the works are soft engineering natural hazard mitigation.*

244. I recommend, for the reason given above, that rule NH-R6 is amended to improve the clarity of the matters of discretion, and to add positive effects as a matter of discretion.

245. I recommend, for the reasons given above, that the title of rule NH-R8 is amended to improve the clarity of the provisions.

246. I recommend, for the reasons given above, that rule NH-R10 is retained as notified.

247. I recommend, for the reasons given above, that standard NH-S1 is amended so that the flood hazard assessments are valid for 5 years, and to enable site wide assessments to be undertaken, where this is appropriate.

248. I recommend that matter of discretion NH-MD2 is retained as notified.

249. The amendments recommended to the NH Chapter rules and standards are set out in **Appendix 1**.

250. In terms of s32AA, the change I have recommended to rule NH-R5 is a more appropriate way to give effect to the purpose of the RMA, in particular section 6(h) and section 7(b) which require the management of significant risks from natural hazards and the efficient use of natural and physical resources. The change will continue to enable the protection of the District's outstanding natural landscapes and features, historic heritage and sites of significance to Māori.

251. The scale of changes recommended to rule NH-R6 and NH-R8 do not require a section 32AA evaluation because the changes are minor and will improve the efficient administration of the MDP by improving clarity of these provisions. Therefore, the original s32 evaluation remains relevant. The change to NH-S1 to enable flood assessment assessments to be valid for 5 years, and to enable site wide assessment is the most appropriate way to achieve Strategic Directions objective ACT-O5 and NH Chapter objective NH-O1.

13. Topic 5 – Hydro Inundation Chapter

Submissions on the Whole HI Chapter and the HI Hazard Overlay

Submissions

252. Nova's (56.06) submission supports the HI Hazard Overlay and the HI Chapter. Twenty-one submissions have been received opposing the HI Chapter and the HI Hazard Overlay. Three further submitters (Lionel Green Family Trust (FS02), The Wolds Ltd (FS11) and B Murray (FS12)), who were not original submitters, lodged submissions in opposition to the HI Chapter and the HI Hazard Overlay. A list of these submissions is provided in Table 5 below:

Table 5: Submissions generally opposing the HI Chapter and HI Hazard Overlay

Submitters	
Michael Beauchamp (30.01)	Neville Cunningham (63.01)
Peter Finnegan (04.01)	Rachel Trumper (59.01)
Anthony Honeybone (08.01)	Nick Ashley (48.01)
Grant and Natasha Hocken (12.01)	Jason Wakelin (32.01)
Mckenzie Properties Ltd (13.01)	Brent Mander (58.01)

High Country Properties Ltd (14.01)	Fat Albert Ltd (23.01)
Alistair Shearer (53.01)	Chris White (47.01)
John Ten Have (26.01)	Springwater Trust (02.02)
Brent Lovelock (41.01)	Mary Murdoch (03.01)
Associate Professor Anna Carr (PhD) (60.01)	James Leslie (05.01)
Elizabeth Shadbolt (37.01)	

253. The key points made in these submissions are summarised below:

- In relation to the HI Chapter provisions and HI hazard Overlay:

    i. Delete the HI Hazard Overlay and HI Chapter from the MDP (Grant and Natasha Hocken (12.01), Mackenzie Properties Ltd (13.01), High Country Properties Ltd (14.01), Brent Lovelock (41.01)).

    ii. Submitters sought their properties are removed from the HI Hazard Overlay and/or that no restrictions / regulatory controls are imposed via the HI Chapter on their properties, including at Pūkaki Airport (Michael Beauchamp (30.01), Elizabeth Shadbolt (37.01), Jason Wakelin (32.01), Fat Albert Ltd (23.01), Mary Murdoch (03.01), Neville Cunningham (63.01), Rachel Trumper (59.01)).

    iii. Delete or amend the HI Chapter provisions to be based on a risk-based approach to manage the hydro inundation risks that allows sustainable development rather than starting from a baseline worst case scenario that immediately avoids development and ignores the likelihood of the hazard occurring (Anthony Honeybone (08.01)).

    iv. Remove the resource consent requirements that apply to Lyford Lane RLZ (SCA12) (Alistair Shearer (53.01)), or do not proceed with the HI Hazard Overlay at Lyford Lane (SCA12) without robust evidence (Associate Professor Anna Carr (PhD) (60.01)).

    v. Replace HI Chapter provisions with permitted rules, provided a 'community response plan' is in place and visitor accommodation clearly displays actions required in the event of hydro inundation (Springwater Trust (02.01)).

vi. Maintain existing land use provisions without introducing new provisions (Nick Ashley (48.01), Brent Mander (58.01)).

vii. If the HI Hazard Overlay is to be included in the MDP then it must have contextual comments and guidance about the risk level identified (John Ten Have (26.01), Jason Wakelin (32.01)).

- Meridian to provide additional information to assist with understanding the risks associated with hydro inundation:

    i. Verify the accuracy of flooding (inundation) predictions (John Ten Have (26.01)).

    ii. Provide a mathematical number on the risk (Elizabeth Shadbolt (37.01), Fat Albert Ltd (23.01), Mary Murdoch (03.01), Neville Cunningham (63.01), Rachel Trumper (59.01), James Leslie (05.01)).

- Meridian to better manage the risk to prevent hydro inundation from occuring:

    i. The Pūkaki Airport should be protected from hydro inundation (John Ten Have (26.01), Nick Ashley (48.01), Brent Mander (58.01), Mary Murdoch (03.01), Neville Cunningham (63.01), Rachel Trumper (59.01), James Leslie (05.01)).

    ii. Build a 2.5m protective dam surrounding the airport, taking into account future runway extensions or build an earth bank/structure to divert flooding from airport properties (John Ten Have (26.01), Nick Ashley (48.01), Fat Albert Ltd (23.01), (Elizabeth Shadbolt (37.01), Nick Ashley (48.01), Fat Albert Ltd (23.01), Mary Murdoch (03.01), Neville Cunningham (63.01), Rachel Trumper (59.01), James Leslie (05.01)).

    iii. Remove the trees that are restricting the flood flows in the Twizel River, Fraser Stream and Dry Stream (at Lyford Lane) (Alistair Shearer (53.01)).

    iv. Providing solutions to mitigate risk (Jason Wakelin (32.01)).

254. Several submitters sought information about the likelihood of a hydro inundation event occurring and that the risk (likelihood and consequence) should be identified on LIMs (John Ten Have (26.01), Elizabeth Shadbolt (37.01), Nick Ashley (48.01), Brent Mander (58.01), Fat Albert Ltd (23.01), Springwater Trust (02.02), Mary Murdoch (03.01), Neville Cunningham (63.01), Rachel Trumper (59.01), James Leslie (05.01)).

255. One submitter sought emergency management response plans to manage the worst-case scenario events stating that MDC must plan, mark and advise of alternative evacuation routes (Brent Mander (58.01)).

256. Submitters consider that MDC should have a better understanding of the risks associated with hydro inundation before implementing changes to the MDP to manage these risks, and limiting landowners property rights (Nick Ashley (48.01), Chris White (47.01), Springwater Trust (02.02), Associate Professor Anna Carr (PhD) (60.01)).

257. One submitter considers Council should compensate them for loss of value/financial hardship as a result of the HI Hazard Overlay and associated rules (Brent Lovelock (41.01)). Grant and Natasha Hocken (12.01) and Mackenzie Properties Ltd (13.01) raised concerns about the HI Chapter having a negative impact on property values, insurance costs and loss of property rights.

258. Submitters requested that the proposed HI Chapter is not proceeded with without undertaking detailed risk contextualisation to avoid undue economic and regulatory consequences (Nick Ashley (48.01)), Associate Professor Anna Carr (PhD) (60.01)).

259. Some submitters discussed information they had previously received about the hydro inundation risks and the measures that the operators have in place to manage the risks (Mary Murdoch (03.01), Springwater Trust (02.02), Chris White (47.01)). For instance, one submitter states "It was also explained that the likelihood of an earthquake canal bursting event was in the 3,000-16,000-year range, and that if this occurred, they had mitigated this with canal design to break towards the upside/topside/westward edge of the canal towards the Te Tari-o-Mauka-Atua / Ben Ōhau range". Another submitter states that it was explained that if an earthquake occurred the canal would 'always break on the topside' and then pond on the westward/topside in the Ben Ōhau range catchment area/s. Submissions state that Ministry of Works and the engineers deliberately designed weak points on the topside of the canal so as no inundation or canal break would occur on the bottom side in the event of earthquakes (Chris White (47.01)).

Analysis

260. Several of the submitters seek relief that cannot be addressed through the MDP, and as this relief would need to be considered by Council outside of the MDPR process, it is not addressed in this s42A report. This includes:

- Requiring Meridian to undertake physical works (John Ten Have (26.01), Nick Ashley (48.01), Brent Mander (58.01), Mary Murdoch (03.01), Neville Cunningham (63.01), Rachel Trumper (59.01), James Leslie (05.01), Fat Albert Ltd (23.01), Elizabeth Shadbolt (37.01), Alistair Shearer (53.01), Jason Wakelin (32.01)).

- Request for emergency management response plans to manage the worst-case scenario events stating that MDC must plan, mark and advise of alternative evacuation routes (Brent Mander (58.01)). I note that Council has recently prepared a Community Response Plan – Hydro Inundation, in consultation with affected community members. This document is on the Council's website.

- Request for compensation for loss of value/financial hardship as a result of the HI Hazard Overlay and associated rules (Brent Lovelock (41.01).

- Submissions discussing previous information received regarding hydro inundation risks and management (Mary Murdoch (03.01), Springwater Trust (02.02), Chris White (47.01)).

- Request that information about the likelihood of a hydro inundation event occurring and that the risk (likelihood and consequence) should be identified on LIMs (John Ten Have (26.01), Elizabeth Shadbolt (37.01), Nick Ashley (48.01), Brent Mander (58.01), Fat Albert Ltd (23.01), Springwater Trust (02.02), Mary Murdoch (03.01), Neville Cunningham (63.01), Rachel Trumper (59.01), James Leslie (05.01)). I have been advised by Ms Shanks that the hydro inundation hazard is identified on LIMs.

261. Several submitters generally oppose the HI Chapter and HI Hazard Overlay and seek additional information about how the inundation mapping was prepared, the likelihood of dam or canal failure, the rationale of developing the HI Hazard Overlay, and the risks associated with hydro inundation, and whether these risks can be avoided through mitigation works.[14] Mr Veale, from Damwatch, has responded to these concerns. Mr Veale's response is attached to this s42A report as **Appendix 3**. A summary of the information in this memo is provided below:

    - Dam Safety in relation to the Waitaki Power Scheme: Dam safety is governed by the Building (Dam Safety) Regulations 2022, which requires dam owners to classify dams, conduct Potential Impact Classification (PIC), and implement Dam Safety Assurance Programmes (DSAP).

    - The PIC for dams and canals assesses the potential impact of a hypothetical dam failure on the community, environment, and infrastructure, and classifies the risks as Low, Medium, or High. PIC is used to set criteria for dam design, construction, and maintenance, irrespective of the likelihood of failure. The PIC does not indicate the likelihood of dam failure but guides safety measures and regulatory requirements. The likelihood of dam failure is very low, but the consequences can be significant.

    - Potential Effect of Developments on PIC: New developments downstream can increase the consequences of a hypothetical dam failure, potentially requiring reclassification to a higher PIC. This can lead to more stringent regulatory requirements and significant investment for dam owners.

    - Rationale for developing the HI Hazard Overlay: The overlay maps potential inundation areas from dam or canal failures, helping MDC manage development to reduce impacts on people and property.

[14] John Ten Have (26.01)), Elizabeth Shadbolt (37.01), Fat Albert Ltd (23.01), Mary Murdoch (03.01), Neville Cunningham (63.01), Rachel Trumper (59.01), James Leslie (05.01), Nick Ashley (48.01)), Associate Professor Anna Carr (PhD) (60.01).

- Commentary on mitigation measures for dam or canal failure: Dam owners prioritise investments in dam safety rather than downstream infrastructure to mitigate failure consequences.

262. The information provided by Damwatch assists to address the questions posed in the submissions, and this information, along with the document entitled Information Sheet – Dam Safety questions and answers (attached to this s42A report as **Appendix 6)** was provided to the submitters on the HI Chapter on 14 April 2025. I do not consider that any amendments to the HI Hazard Overlay nor the HI Chapter provisions are required as a result of the information provided by Damwatch which addresses these questions. I therefore recommend that these submissions opposing the HI provisions generally [15] are rejected.

263. I consider that the information provided by Damwatch (**Appendix 3**) addresses the submission points seeking that contextual comments and guidance about risk levels are provided alongside the HI Hazard Overlay (John Ten Have (26.01) and Jason Wakelin (32.01)). This information is publicly available. I do not consider that this information should be included as part of the MDP. I therefore recommend that these submissions (26.01 and 32.01), which seek that the contextual information is included in the MDP, are rejected.

264. Several submitters oppose the HI Chapter and seek that the risks associated with hydro inundation are not managed via provisions or an overlay in the MDP, or that the HI Chapter and HI Hazard Overlay are deleted or are removed from applying to specific properties/areas. By way of background, PC28 proposes to carry-over the provisions in the MDP that currently manage the risks of hydro inundation that apply in the Rural Zone (now the GRUZ via PC23). This framework was introduced into the MDP via Plan Change 13 (PC13) (between 2013 and 2018). As described in the Damwatch memo (**Appendix 3**) the HI Hazard Overlay was developed by Opus International Consulting Ltd and Damwatch using all available dam and canal breach hazard information, including:

- Comprehensive dam breach flood hazard maps for a hypothetical breach of the Pūkaki Dam (prepared by Works Consultancy Services in 1990);

- Broad scale dam breach flood hazard maps for a hypothetical breach of the Pūkaki Inlet Dam (prepared for Meridian Energy by Damwatch in 2014);

- Broad scale canal breach flood hazard maps for hypothetical breaches of the Ohau A, Ohau B and Ohau C Canals (prepared by a joint Damwatch and Opus study in 2005);

- Detailed canal breach flood hazard maps pertaining to specific hypothetical breach scenarios for the Tekapo Canal (prepared for Genesis Energy by Opus in 2013); and

[15] John Ten Have (26.01)), Elizabeth Shadbolt (37.01), Fat Albert Ltd (23.01), Mary Murdoch (03.01), Neville Cunningham (63.01), Rachel Trumper (59.01), James Leslie (05.01), Nick Ashley (48.01)), Associate Professor Anna Carr (PhD) (60.01).

- Detailed canal breach flood hazard maps pertaining to specific hypothetical breach scenarios for the Pūkaki, Ohau Canals and Ruataniwha Dam (prepared for Meridian Energy by Damwatch in 2013).

265. The inundation hazard areas defined for all hypothetical canal and dam breach locations and scenarios from these studies were integrated (overlaid) to produce the HI Hazard Overlay. The memo prepared by Mr Veale of Damwatch (attached to this s42A report as **Appendix 3**) describes the methodology used to produce the HI Hazard Overlay in more detail and explains why managing activities within the HI Hazard Overlay is important for both the protection of people and property, and for the management of the hydro generation schemes.

266. At the time the provisions to manage hydro inundation were introduced into the MDP, the provisions could only manage activities in the Rural Zone, because the scope of PC13 was limited to the Rural Zone. For this reason, the HI Hazard Overlay in the MDP does not include areas outside the GRUZ that have the potential for hydro inundation. This gap has been addressed in PC28's HI Hazard Overlay which now identifies all known areas with the potential for hydro inundation. Areas added to the HI Hazard Overlay by PC28 are located at the Pūkaki Airport, within the AIRPZ, and Lyford Lane (SCA12) and Flanagan Lane, which are both within the RLZ.

267. The rule framework that is within the MDP that applied in the Rural Zone is largely aligned with the framework proposed for the GRUZ which is in the proposed HI Chapter. Consideration of the effectiveness of this framework undertaken as part of the District Plan review process indicated that this framework was working effectively. Some changes to the provisions have been made to align the provisions with the NP Standards, and the new structure of the MDP. These changes are described in the document entitled Information Sheet – Dam Safety questions and answers (**Appendix 6**).

268. However, there was no objective that specifically addressed the need to manage risks to people and property associated with hydro inundation in the MDP. This has been addressed by inserting the following objective:

> ***HI-O1***
>
> *Development in the Hydro Inundation Hazard Overlay minimises risks to human health and property from hydro inundation, and avoids reverse sensitivity effects on hydro electricity generation activities.*

269. This objective contributes to achieving the MDP's Strategic Directions objective ATC-O4 and Policies A and D of the National Policy Statement for Renewable Electricity Generation (NPS-REG) by recognising the national significance of the Mackenzie District's renewable electricity generation assets and activities and seeking to avoid new development that may result in reverse sensitivity effects on such assets and activities. The objective also contributes to achieving ATC-O6 which seeks to ensure that the location and effects of activities are managed to minimise conflicts between incompatible activities and protect important existing activities from reverse sensitivity effects.

270. The MDP contains a hydro inundation policy, policy 3B11, which states:

> *Avoid occupied buildings that are likely to result in a requirement to cease to operate, upgrade, modify or replace the hydro-electricity related structures or significantly alter the operation of the affected portion of the hydroelectricity scheme.*

271. PC28 proposes to delete this policy and replace it with HI-P1:

> *Avoid, as far as practicable, changes to existing land use activities in the Hydro Inundation Hazard Overlay that may increase the likelihood or scale of harm to people or property from hydro inundation, or the potential for reverse sensitivity effects. Where it has been demonstrated that avoidance is not practicable, minimise the potential for harm.*

272. The MDP rule that managed new 'occupied buildings', which is a defined term, in the Rural Zone Section is proposed to be replaced with the HI Chapter rules HI-R1 and HI-R3 that apply to new 'occupied buildings' and residential visitor accommodation in the GRUZ. For new occupied buildings in the GRUZ that are in the HI Hazard Overlay, HI-R1 is largely consistent with the existing MDP rule, which permits these activities if they comply with the conditions. Where one or more of the conditions cannot be complied with, the activity is a discretionary activity and will require a resource consent. This allows MDC to assess the proposal against the objectives and policies in the MDP and manage the potential for reverse sensitivity effects and risks to people and the community.

273. The proposed new areas (Pūkaki Airport, Lyford Lane and Flanagan Lane) within the HI Hazard Overlay are not zoned GRUZ, and therefore careful consideration of what activities should be managed in these areas informed the proposed provisions that apply to these areas. The proposed provisions manage residential activities, residential visitor accommodation, and subdivision. The rules (HI-R2 and HI-R3) provide for residential activity as a permitted activity, provided there is no more than one residential unit per site, and strongly discourage residential visitor accommodation, which is a non-complying activity.

274. Subdivision at the RLZ properties at Flanagan Lane (which is within the HI Hazard Overlay) are Discretionary activities under the RLZ rules, as the minimum lot size in this area is 4 ha and the lots affected are between 1.9 hectares and 7.0 hectares. Therefore, while subdivision is proposed to be non-complying in this area under the hydro inundation provision in the SUB Chapter (proposed rule SUB-R7E), no additional lost opportunity costs for Flanagan Lane properties will arise, given there are no lots with subdivision potential under the existing minimum lot size for this area. Subdivision at Lyford Lane is non-complying in the MDP and this activity status has been carried forward to the SCA12 Lyford Lane RLZ zone (via PC25). In SCA12 Lyford Lane, residential visitor accommodation is already a non-complying activity under the zone provisions, so no lost development opportunity costs have been identified for the Lyford Lane properties affected. At the Flanagan Lane properties affected by the HI hazard Overlay, residential visitor accommodation is a permitted activity under the zone provisions, whereas it is non-complying under the hydro inundation provisions. This is a lost development opportunity

cost resulting from these provisions for the properties affected by the HI Hazard Overlay at Flanagan Lane.

275. At Pūkaki Airport, less development restrictions are proposed relating to the hydro inundation risk because the activities provided for in this zone are less sensitive than those provided for in the RLZ zone. Residential uses are restricted to being within an airport building and up to 150m^2 in area, and visitor accommodation is not provided for, except for Aviation Related Visitor Accommodation. The additional rule to manage residential visitor accommodation in this zone in the HI Chapter is not expected to limit land uses in the zone significantly over and above the limitations from the AIRPZ provisions.

276. While I acknowledge that including the HI Hazard Overlay in the MDP is of concern to landowners in the areas affected, I consider that the approach proposed is appropriate for managing the risks to people and property while minimising reverse sensitivity effects on the District's existing hydro generation schemes. I recommend that the submissions[16] that seek the HI Chapter and the HI Hazard Overlay be deleted from the MDP, or that the overlay and/or HI Chapter is amended, are rejected.

277. The information provided by Damwatch (**Appendix 3**) and the information provided in response to some of the questions raised by submitters (**Appendix 6**) addresses the submission points seeking verification of the accuracy of flooding (inundation) predictions (John Ten Have (26.01)), and the requests for a mathematical number on the risk (Elizabeth Shadbolt (37.01), Fat Albert Ltd (23.01), Mary Murdoch (03.01), Neville Cunningham (63.01), Rachel Trumper (59.01), James Leslie (05.01)). The Damwatch memo describes how the hydro inundation mapping was prepared and discusses the likelihood of a dam or canal failure. Given the evidence behind identification of the HI Hazard Overlay mapping and the potential consequences of a dam or canal failure in the Waitaki Power Scheme, it was not considered necessary to assign a number to the risk during development of PC28, as the approach for managing this risk is already part of the MDP. Further to this, the Building Act 2004, the Building (Dam Safety) Regulations 2022 and the New Zealand Dam Safety Guidelines 2024 do not require that a numeric value be assigned to the risk of a dam or canal breach.

278. I therefore recommend that these submission points (John Ten Have (26.01)), and the requests for a mathematical number on the risk (Elizabeth Shadbolt (37.01), Fat Albert Ltd (23.01), Mary Murdoch (03.01), Neville Cunningham (63.01), Rachel Trumper (59.01), James Leslie (05.01)) are rejected.

[16] Submissions this recommendation relates to are: Grant and Natasha Hocken (12.01), Mackenzie Properties Ltd (13.01), High Country Properties Ltd (14.01), Brent Lovelock (41.01), Anthony Honeybone (08.01), Alistair Shearer (53.01)), Associate Professor Anna Carr (PhD) (60.01), Springwater Trust (02.01), Nick Ashley (48.01), Brent Mander (58.01)),Fat Albert Ltd (23.01), Mary Murdoch (03.01), Neville Cunningham (63.01), Rachel Trumper (59.01), Nick Ashley (48.01), Chris White (47.01), Springwater Trust (02.02), Michael Beauchamp (30.01), Elizabeth Shadbolt (37.01), Jason Wakelin (32.01)

Recommendation

279. I recommend, for the reasons given above, that the HI Hazard Overlay and the HI Chapter objectives, policies and rules are retained as notified.

Submissions seeking changes to the HI Chapter Introduction, Objectives, Policies and Rules

Submissions

280. Meridian (39.16) seeks an amendment to the Introduction statement of the HI Chapter to be clear that the Waitaki Power Scheme infrastructure both contains water (for example behind dams) and conveys water (for example through canals) for hydro electricity generation purposes. Genesis (46.21) supports the introduction, and seeks it is retained as notified.

281. NHC's (29.22, 29.23), Genesis's (46.22, 46.23) and Meridian's (39.17, 39.18) submissions support HI Chapter objective HI-O1 and policy HI-P1 and seek that these provisions are retained as notified. CRC's (50.34, 50.35) submission is neutral on these provisions.

282. Meridian and Genesis lodged submissions on the rules in the HI Chapter. Meridian (39.19) supports the rules (HI-R1- R3) and considers that the rules strike an appropriate balance between enabling landowners to develop and use their land and minimising risks to human health and property from possible hydro inundation. CRC's submission is neutral on rules HI-R1-R3 (50.36). Genesis (46.26) supports rule HI-R3.

283. Genesis (46.24) supports rule HI-R1 in part. This rule provides for new occupied buildings in the GRUZ, within the HI Hazard Overlay, as permitted activities where these buildings do not raise the PIC under the Building Act, as this recognises the increased reverse sensitivity towards the presence and operation of the Waitaki Power Scheme. Genesis considers that, it is also important to note that activities that may impose requirements to change operational or management practices are not limited to those that raise the PIC between "Low, Medium and High". For example, where an activity causes an increase in or change to a population at risk, there may be impacts on the Waitaki Power Scheme even where the PIC does not increase between the low, medium or high categories.

284. Genesis notes that the change in requirements arising from a change in PIC classification can include changes in Emergency Response Plans and potential changes in performance criteria as well as implications for scheme upgrades that may not be technically feasible or financially viable. The change to HI-R1 sought by Genesis seeks to widen the permitted activity conditions in HI-R1 to include any new occupied building that 'may increase the safety management requirements for a hydroelectricity scheme'. Genesis states that this change will ensure that increases in the safety management requirements of a hydroelectricity scheme not associated with changes in PIC, are also captured.

285. Genesis (46.25) also seeks that an additional rule be included in the HI Chapter. Genesis considers that, while the proposed definition of 'occupied buildings' encompasses a range of activities, Rule HI-R1 does not adequately capture the scope of other activities (which may not necessarily be associated with new occupied buildings) that may also result in a PIC change or increase in the safety management requirements for a hydroelectricity operator. Genesis has not provided an example of the types of activities it is concerned about in its submission. The recommended relief proposed by Genesis is to include a new rule that captures these other activities to ensure reverse sensitivity effects on the Waitaki Power Schemes are appropriately managed.

286. Springwater Trust (02.01) seeks that the non-complying activity status for residential visitor accommodation within the HI Hazard Overlay is changed to a permitted activity, subject to conditions. The suggested conditions include the Community Response Plan Hydro Inundation[17] being completed and available to visitors on arrival at the accommodation, and the accommodation clearly displaying the actions required in the event of hydro inundation. The submitter considers that Mackenzie District needs visitor accommodation to support its tourism growth objectives and flow on economic benefits and PC28 puts an unnecessary barrier in the way of this growth.

Analysis

287. I recommend that Meridian's submission on the Introduction statement for the HI Chapter is accepted. I consider the amendments Meridian suggest more clearly describe the existing hydro schemes in the District. I recommend that this submission (39.16) is accepted, as it will assist with the efficient administration of the MDP.

288. I understand Genesis' concern that there may be some situations where new occupied buildings will not raise the PIC under the Building Act but may still result in increase in the safety management requirements for its hydroelectricity scheme. However, rule HI-R1 is largely a roll-over of the current rule that applies in the GRUZ from the Operative District Plan (refer Information Sheet, **Appendix 6**). This rule was imposed by the Environment Court and has been implemented effectively over the past 7 (approx.) years. I am not aware of any situations where activities have resulted in requirements for the hydro-electric scheme operators to increase their safety management requirements as a result of the implementation of this rule.

289. Also, I do not consider the relief sought by Genesis to be appropriate as a permitted activity condition. This condition would require applicants to demonstrate that their new occupied building will not increase the safety management requirements for a hydroelectricity scheme. This is not something that a layperson could feasibly demonstrate and would require technical input from a suitably qualified and experienced person. While I agree that technical input (from either Meridian or Genesis) would be required to demonstrate that the PIC won't change as a result of a new 'occupied building', I consider that determining whether the safety management

[17] Link to the Community Response Plan Hydro Inundation 2024
https://www.mackenzie.govt.nz/services/emergency-management/mackenzie-district-emergency-plans

requirements may change is a more elusive test that may be problematic to demonstrate with any certainty. For these reasons, I recommend that this submission (46.24) is rejected.

290. I do not agree with Genesis' submission seeking a new rule that applies to all activities within the GRUZ and within the HI Overlay, for the reasons I have discussed in paragraph 267 above. The rules that apply to the GRUZ are a roll-over of the MDP rules[18] imposed by the Environment Court, and I am not aware of any situations where the implementation of the rules has. I therefore consider that the rule framework is appropriate. I also consider that the definition of 'occupied building' is not limited to residential units and captures a broad range of activities. It includes any building:

> *in which people reside, occupy or work on a permanent or regular basis; and includes residential units, home occupations, factory farming, wintering barns, herd homes and dairy sheds.*[19]

291. The purpose of the HI Chapter rules that apply in the GRUZ, along with the definition of 'occupied building', is to manage the development of buildings that people may reside in or work in for long periods of time. The proposed rule framework (which is a roll-over of the Operative District Plan framework) captures all of these buildings. I do not consider it necessary to expand this to include 'all activities' as I consider the net cast by 'occupied buildings' is sufficiently wide to manage the risks associated with hydro inundation. I recommend that this submission (46.25) be rejected.

292. In relation to the Springwater Trust's submission, I note that the non-complying activity status for residential visitor accommodation imposed via rule HI-R3 applies in the RLZ and AIRPZ. I have discussed the activity status for residential visitor accommodation within the HI Hazard Overlay in paragraphs 288-291 above. At Lyford Lane SCA12, residential visitor accommodation is already a non-complying activity, so the HI Chapter Rule HI-R3 aligns with this existing activity status. At the Flanagan Lane land that is within the HI Hazard Overlay, residential visitor accommodation is a permitted activity under the RLZ Chapter rules.[20][21] The non-complying activity status is considered appropriate to discourage this activity in this area. However, there may be situations where the risks to visitors can be appropriately managed, and the non-complying activity status provides the pathway to consider these situations on a case by case basis. I therefore consider that the non-complying activity status for residential visitor accommodation is appropriate as it gives effect to HI Chapter objective HI-O1, which requires development in the HI Hazard Overlay to minimise risks to human health and property.

[18] Some changes to these provisions have been made to align the terminology with the NP Standards and to align with the structure of the MDP following the MDPR.
[19] Definition of Occupied Building in PC28.
[20] Residential Visitor Accommodation is also permitted under the Rural Residential Zone Manuka Terrace rules in the Operative District Plan that apply at the Flanagan's Lane area, under rule 3.3 in Section 7A.
[21] RLZ Chapter Rule RLZ-R7 (subject to appeal)

293. The non-complying activity status for residential visitor accommodation that applies at the Pūkaki Airport aligns with proposed rule AIRPZ-R9 which also classifies residential visitor accommodation as a non-complying activity. For the reasons I have discussed above in relation to the RLZ, I consider that the non-complying activity status for residential visitor accommodation is appropriate at Pūkaki Airport, which is within the HI Hazard Overlay. I recommend that this submission (02.01) is rejected.

Recommendations

294. I recommend, for the reasons given above, that the Introduction Statement of the HI Chapter is amended to improve the accuracy of the description of the Districts' hydro schemes.

295. I recommend, for the reasons given above, that the HI Chapter objectives, policies and rules are retained as notified.

296. The amendment recommended to HI Chapter is set out in **Appendix 1**.

297. The scale of change does not require a section 32AA evaluation because the change does not alter the general intent and the therefore original s32 evaluation remains relevant.

14. Topic 6 – Variations

Variation 1 to PC 26 and Variation 1 to PC 27

Submissions

298. For PC28 Part A (Hazards and Risks) these variations propose to:

- Amend Table 1 in the Renewable Energy Chapter (REG Chapter) to refer to the relevant PC28 Contaminated Land, Natural Hazards and Hazardous Substances Chapters;
- Amend Table 1 in the Infrastructure Chapter (INF Chapter) to refer to the relevant PC28 Contaminated Land, Natural Hazards and Hazardous Substances Chapters; and
- Vary the Subdivision Chapter of PC27 (within the 'Subdivision' section in 'Part 2 – District Wide Matters') to include additional rules SUB-R7A – SUB-R7E that apply to subdivision within the new PC28 overlay areas.

299. Several submissions supported either or both Variation 1 to PC26 and Variation 1 to PC27, as they relate to the Hazards and Risks Chapters in PC28 Part A, seeking that these variations are retained as notified (Telcos (35.05), Nova (56.12, 56.11), OWL (64.12, 64.13), CRC (50.08, 50.09), Genesis (46.04).

300. Transpower (31.13) seek an amendment to Table 1 of the INF Chapter to remove reference to HAZS-O2 and replace it with HAZS-O1. Transpower consider that it is not clear why HAZS-O1 Use and Storage of Hazardous Substances is not included in the list, while the implementing

policy HAZS-P1 is. Similarly, it is not clear why HAZS-O2 is included in the list, but the implementing policy HAZS-P3 Location of Sensitive Activities is not. Transpower considers that infrastructure activities are not sensitive activities and therefore objective HAZS-O2 (and policy HAZS-P3) are not likely to be relevant to the Infrastructure Chapter. Further, some infrastructure activities involve the use and storage of hazardous substances. Therefore, it considers that it is appropriate that HAZS-O1 applies to infrastructure.

301. Genesis (46.05) seeks an amendment to Table 1 of the REG Chapter to remove reference to the HAZS chapter because it considers that applying additional controls to Renewable Electricity Generation facilities, which often require storage of hazardous substances for batteries, transformers, and other operational necessities, is in opposition to the intention of the REG Chapter which seeks to provide for these activities.

302. Several submitters support Variation 1 to the Subdivision Chapter (as it relates to PC28 Part A Hazards and Risks). CRC (50.48, 50.49) seeks an amendment to objective SUB-O1 and policy SUB-P1 to recognise that the MDP manages subdivision in areas subject to natural hazards. Other submitters support the proposed rules in the Subdivision Chapter to manage subdivision activities within the natural hazard overlays. Nova (56.13) supports proposed rules SUB-R7A-SUB-R7E, CRC (50.51) supports rules SUB-R7B-R7E.

303. CRC (50.50) seeks an amendment to SUB Chapter rule SUB-R7A, which manages subdivision in the Fault Hazard (Subdivision) Overlay, to amend the scale of mapping required in condition 1 of this rule.

304. Genesis (46.27) seeks an amendment to rule SUB-R7E, which manages subdivision within the HI Hazard Overlay and applies a restricted discretionary activity for subdivision in the GRUZ. Genesis considers that subdivision within the HI Hazard Overlay will allow for increased activity in the overlay, which could increase the Potential Impact Classification of a hydroelectricity scheme and therefore result in additional technical and/or financial burden on operators. It considers that this is a relevant consideration that should be given regard to when assessing a subdivision application and has sought an additional matter of discretion be added to this rule.

305. Meridian (39.23) seeks an amendment to rule SUB-R7E to correct a drafting error in the part of the rule that applies to the GRUZ. It seeks that the part of the rule that applies to the RLZ is retained as notified.

Analysis

306. I agree with the submission by Transpower (31.13) that objective reference in Table 1 of the INF Chapter should be HAZS-O1 which relates to the use and storage of hazardous substances. I consider this to be a drafting error that requires correcting. I do not agree that the provisions that manage major hazard facilities should be deleted from this table. I acknowledge that there may be some major hazard facilities that are also defined as 'critical infrastructure'. In these situations, both the INF Chapter (and/or the REG Chapter), along with the provisions that apply to major hazard facilities in the HAZS Chapter will apply to these activities. For clarity, I consider

that, and the cross references in Table 1 in both the INF and REG Chapters are required and should be retained. I therefore recommend that this submission (31.13) is accepted in part.

307. I do not agree with Genesis' relief (46.05) to remove reference to the HAZS Chapter provisions in Table 1 of the REG Chapter. If REG facilities require the storage of hazardous substances for batteries, transformers, and other operational necessities, then it is appropriate to apply HAZS-R1, which requires the hazardous substances activity to be outside of a high flood hazard area. Where this cannot be achieved, a restricted discretionary resource consent process is initiated. Therefore, I recommend that this submission (46.05) is rejected. However, I recommend a consequential change to the HAZS Chapter provisions references in this table to include reference to objective HAZS-O1 (that aligns with my recommended changes in response to Transpower's submission on the INF Chapter) are also made to the REG Chapter. This will ensure that the provisions refer to activities associated with the storage and use of hazardous substances.

308. I agree with CRC's submissions (50.48, 50.49) on SUB Chapter objective SUB-O1 and policy SUB-P1 to amend these provisions to recognise that the MDP manages subdivision in areas subject to natural hazards, via the SUB Chapter rules and overlays. I consider that these amendments will provide a clear connection to the rules in the SUB Chapter and provide additional guidance for decision making on subdivision applications. These amendments will assist with giving effect to CRPS objective 5.2.1 and Policies 5.3.2 and 5.3.5. I therefore recommend that these submissions (50.48, 50.49) are accepted.

309. I agree with the CRC submission (50.50) seeking an amendment to the scale of the map required for subdivision within the Fault Hazard (Subdivision) overlay from "1:35,000 or better" to "1:10,000 or better", which is a more detailed scale. The smaller the scale of the map, the more accurate it will be, meaning that managing the adverse effects of a fault rupture is more precise and accurate. This change may have the benefit of enabling more land to be available for development, due to the improved precision of the fault mapping. However, this may increase the cost of complying with the condition, as producing a 1:10,000 scale map may cost more than a 1:35,000 scale map. The consequence of not complying is a change in activity status for the subdivision activity from restricted discretionary to discretionary.

310. I consider that this change will be more appropriate for achieving NH Chapter objective NH-O1 which seeks to ensure risks from natural hazards are avoided or appropriately managed. The amendment will also assist with giving effect to CRPS objective 11.2.1, which requires the avoidance of new subdivision that increases risks associated with natural hazards, and, where avoidance is not possible, mitigation measures minimise risks. The change will also assist in giving effect to policy 11.3.1 which seeks to avoid subdivision in high hazard areas unless loss of life, serious injuries or significant damage or loss is unlikely. I therefore recommend that this submission (50.50) be accepted.

311. I do not agree with Genesis (46.27) that subdivision in the GRUZ will allow for increased activity in the HI Hazard Overlay. I consider that the HI Chapter rules that apply to activities in the GRUZ,

along with the GRUZ rules, establish an appropriate rule framework to manage activities that may impact upon the Potential Impact Classification or increase the safety management requirements for the hydroelectricity schemes. However, I do consider it appropriate to include an assessment matter in this rule that enables the consideration of the potential for reverse sensitivity effects on the hydro scheme, if it is relevant to the subdivision application. I consider that this amendment to rule SUB-R7E is appropriate to give effect to HI Chapter objectives HI-O1. I recommend that this submission (46.27) is accepted in part.

312. I consider that the drafting change sought by Meridian (39.23) to rule SUB-R7E will improve the rule structure and assist with the efficient implementation of the MDP. I recommend that this submission is accepted.

Recommendation

313. I recommend, for the reasons given above, that Table 1 in the INF Chapter and Table 1 in the REG Chapter are amended to also refer to objective HAZS-O1 which relates to the use and storage of hazardous substances, and that the references to the provisions in the HAZS Chapter that relate to major hazard facilities are retained in these tables, as notified.

314. I recommend, for the reasons given above, that the SUB Chapter objective SUB-O1 and policy SUB-P1 are amended to recognise that the subdivision rules also manage subdivision in the NH Overlays and the HI Hazard Overlay, and that rule SUB-R7A is amended to change the scale of fault hazard mapping required in condition 1 of this rule, and SUB-R7E is amended to add an additional matter of discretion and improve the rule drafting.

315. The amendments recommended to Table 1 of both the INF Chapter, REG Chapter and the SUB Chapter are set out in **Appendix 1**.

316. The amendment I have recommended to objective SUB-O1 is more appropriate to achieve section 6(h) of the RMA, which identifies the need to manage significant risks from natural hazards as a matter of national importance. The amendment I have recommended to policy SUB-P1, and the rules in the SUB Chapter that relates to natural hazards management and risks management, will be more efficient and effective at achieving objectives NH-O1 and HI-O1, as well as the Strategic Directions objective ATC-O5 which requires the management of natural hazard risks is integrated with the effects of climate change and allows the community to be resilient and adapt appropriately to change. While the changes may result in additional costs associated with mapping of faults to a more detailed scale, I consider that these costs are outweighed by the benefits of having a more accurate map of the fault and enabling more land to be suitable for development, as well as avoiding natural hazard risk to people and property. The additional matter of discretion in rule SUB-R7E is more effective in achieving objectives HI-O1 and REG-O1 which seek to manage reverse sensitivity effects on the Waitaki hydro electricity schemes and to enable renewable energy generation to achieve the Government's targets for renewable electricity generation.

15. Topic 7 - Site Specific Requests

Flood Hazard Assessment Overlay and Liquefaction Overlay

Submissions

317. Tekapo Landco Limited and Godwit Leisure Limited own land at Lakeside Drive, Takapō / Tekapo that accommodates Lakes Edge (the Tekapo Holiday Park) and the Station Bay residential development. The submitter has sought the deletion of the Flood Hazard Assessment Overlay (09.01) and the Liquefaction Overlay (09.02) from part of its property (Lot 1 DP 455053). It considers that the mapping of these overlays is not based on site specific investigations. Figure 1 shows the submitter's land and Figure 2 shows the Hazards and Risks Overlay at the site.

Figure 1: Tekapo Landco Ltd and Godwit Leisure Ltd land

Figure 2: Image showing Flood Hazard Assessment Overlay (red) and Liquefaction Overlay (blue) encroaching eastern edge of submitters site

Analysis

318. The Flood Hazard Assessment Overlay and the Liquefaction Overlay do not map areas at risk of these natural hazards, rather, they map areas that may be susceptible to the risk of these natural hazards and require site specific investigation. The rule framework proposed via PC28 sets out the methods required to determine if the specific sites are susceptible to flooding or liquefaction, at the time a development or subdivision of the site within the overlay is proposed.

319. The Flood Hazard Assessment Overlay encroaches a small area of Lot 1 DP 455053. Lot 1 DP 455053 is proposed to be zoned Takapō / Lake Tekapo Special Purpose Accommodation Zone (via PC30) and accommodates the Tekapo Holiday Park. The proposed rules for the Flood Hazard Assessment Overlay are triggered if a new Natural Hazard Sensitive Building or Critical Infrastructure is proposed to be located within the overlay, or if extensions to Natural Hazard

Sensitive Buildings are proposed (rules NH-R1-R4). These rules will only apply to the relatively small area of the submitter's site that is within the Flood Hazard Assessment Overlay.

320. For subdivision activities, proposed rule SUB-R7B requires a restricted discretionary resource consent for a subdivision where any part of any proposed allotment is within the Flood Hazard Assessment Overlay. Therefore, a subdivision of Lot 1 DP 455053 would require a Flood Hazard Assessment because the site is partially within the Flood Hazard Assessment Overlay.

321. The total area of the submitter's site that is within the Flood Hazard Assessment Overlay is very small. The Flood Hazard Assessment Overlay encroaches the lot by approximately 8m (at the widest part), and only at the northern end of the property. Advice on this submission has been received from Nick Griffiths of CRC. Mr Griffiths considers that amending the boundary of the Flood Hazard Assessment Overlay in this location is appropriate because the mapping is relatively conservative in this location, and the subject site appears to have been raised, so the likelihood of flooding from Takapō / Lake Tekapo is very low (refer **Appendix 4**). I therefore recommend that the submission point (09.01) to remove the Flood Hazard Assessment Overlay from Lot 1 DP 455053 is accepted.

322. The Liquification Overlay encroaches also a small area of Lot 1 DP 455053, adjacent to Lakeside Drive. PC28 proposes a new rule in the Subdivision Chapter (SUB-R7C) that applies to any part of any proposed allotment within the Liquefaction Overlay. This rule requires a site-specific subsurface liquefaction assessment to be completed to at least a Level B assessment – 2017 MBIE/MFE Liquefaction Guidance. If this assessment is not provided with the application, then, there is no change in the activity status for the subdivision, and it will remain restricted discretionary. For situations where no buildings are proposed within the area of the site affected by the Liquefaction Overlay, an argument could be made (in the subdivision application) that the assessment is not required, and this would not change the overall activity status for the subdivision.

323. The Liquefaction Overlay encroaches the property by approximately 18m at its widest part, at the northern end of the property. Given the Liquefaction Overlay encroaches further into the submitter's property than the Flood Hazard Assessment Overlay, I consider that this overlay should remain. If the property is subdivided in the future, determining whether special foundation design is necessary in this location, and including this information on the resultant title, will alert the landowner to these requirements. If the development wishes to avoid obtaining a geotechnical assessment for the land within the overlay, they can elect to not have buildings in this area. I consider that this approach is the most appropriate way to achieve NH-O1. For these reasons, I consider that the submission (09.02) seeking the removal of the Liquefaction Overlay on Lot 1 DP 455053 is rejected.

Recommendation

324. I recommend, for the reasons given above, that the Flood Hazard Assessment Overlay is amended to exclude Lot 1 DP 455053, and that the Liquefaction Overlay is retained as notified.

325. The amendment recommended to the Flood Hazard Assessment Overlay is set out in **Appendix 2**.

326. In terms of s32AA, the recommended amendment to the Flood Hazard Assessment Overlay will improve the efficient administration of the MDP and will not impact on the effective management of flood hazard risk in the District and will result in economic benefits for the landowner not needing to consider flood hazard matters at the time the land is developed.