Nelson City Council
Te Kaunihera o Whakatū

Plan Change 29 to the NRMP

Section 42A Report – Natural Hazards

Prepared by Sue Robb and Janice Carter

24 June 2024

1.0 Table of Contents

2.0 Executive Summary 4
3.0 Acronyms and Abbreviations 5
4.0 Introduction to the Report 6
4.1 Purpose of the report 6
4.2 About the Authors 6
4.3 Supporting evidence 7
5.0 Statutory Requirements 9
5.1 Statutory documents 9
5.2 Nelson Regional Policy Statement 9
5.3 Section 32AA evaluation 10
5.4 Procedural matters 10
6.0 Background and context 12
6.1 Background 12
7.0 Issues arising or changed since notification 14
8.0 Consideration of submissions and further submissions 15
8.1 General natural hazard submissions received 15
8.2 Support for and opposition to the natural hazard approach (including overlay mapping and housing intensification 15
8.3 No intensification in natural hazard areas 17
8.4 Plan Change 30 and its overlap with PC29 18
8.5 Other matters 19
8.6 General comments (no relief sought) 20
8.7 General natural hazard objective 22
8.8 General natural hazards policy 24
9.0 Consideration of submissions and further submissions– Coastal and River Flood Hazard and Stormwater [Sue Robb] 26
9.1 Overview of submissions received 26
9.2 Spatial extent of the coastal flood scenario 1% AEP event SSP 8.5(H+) (including Vertical Land Movement-VLM), river flood and the scope of PC29 26
9.3 Land potentially affected by 1% AEP event SSP 8.5(H+) (including VLM) SSP5 and a combination of coastal and river flood not being included in the PC29 areas with proposed residential intensification provisions 27
9.4 Flood Hazard - General Matters 30
9.5 Appropriateness of the Flood Hazard Policies 32
9.6 Appropriateness of the Flood Hazard Rules, including definitions 43
9.7 Robustness of the river flood hazard modelling and mapping (Overlays) 56
9.8 Hardy, Tasman, Domett and Nile streets area, River Flood Overlay review 60
9.9 Glenduan – Rezoning for commercial and industrial purposes 63
9.10 100 Tasman Street 63
9.11 2 Little Todd Valley Road, removal of NRMP Flood Overlay polygon 64
9.12 Zoning related flood matters 65
9.13 Miscellaneous matters 66
10.0 Consideration of submissions and further submissions– Slope instability and Debris run-out 70
10.1 Overview of submissions received 70

10.2	Slope instability hazard – general matters	70
10.3	The appropriateness of the slope instability and debris run-out policies	73
10.4	The appropriateness of the slope instability and debris run-out areas rules and definitions	75
10.5	The robustness of the slope instability and debris run-out hazard mapping/overlays	84
11.0	**Consideration of submissions and further submissions– Liquefaction**	**93**
11.1	Overview of submissions received	93
11.2	The appropriateness of the liquefaction hazard policies	93
11.3	The appropriateness of the liquefaction hazard rules	96
12.0	**Consideration of submissions and further submissions – Fault Hazard**	**100**
12.1	Overview of submissions received	100
12.2	Fault hazard - general matters	100
12.3	The appropriateness of the fault hazard policies	101
12.4	The appropriateness of the fault hazard rules, including definitions	103
12.5	The robustness of the fault hazard mapping	107
13.0	**Conclusion**	**111**

Appendices

Appendix 1: Accept/Reject Recommendations Table

Appendix 2: List of submissions seeking to apply '*no greater than General Residential Zoning rules in all Hazard overlays*'

Appendix 3: List of submissions relating to *the High Flood Hazard and Flood Hazard overlays (Hardy, Tasman, Domett and Nile streets area)*

Appendix 4: List of submissions requesting rezoning of the Domett Street/ Hardy Street/ Tasman Street and Nile Street block High Density Residential Zone (HDZ)

Appendix 5: Recommended Changes to the Planning Maps - Flood

Appendix 6: Recommended Changes to the Planning Maps – Fault Deformation Overlay

2.0 Executive Summary

1. This section 42A report responds to submissions relating to natural hazard provisions and has been jointly authored by Sue Robb and Janice Carter. Sue Robb specifically addresses the submissions on PC29 relating to flood hazard overlays and provisions. Janice Carter specifically addresses submissions relating to slope instability, liquefaction and fault overlays and provisions.

2. The analysis undertaken in this report is informed by the section 32 Report for PC29. It is also informed by the expert evidence of Dan Chamberose, Damien Velluppillai, and Toby Kay.

3. Following a detailed review of the issues raised by the submissions and further submissions, and discussions with some submitters, the following outlines the key amendments that are proposed to the natural hazard provisions of PC29:

   a) Amending the naming of the Slope Instability Overlays and making those changes throughout PC29.

   b) Deleting part of the Fault Deformation Overlay at Marsden Valley and reducing its width at Bayview Road.

   c) Deleting the High Flood Hazard Overlay and Flood Hazard Overlay at 23 Todd Bush Road and at 19 Todd Bush Road respectively.

   d) Deleting the High Flood Hazard and Flood Hazard Overlays at 100 Tasman Street.

   e) DO2.2.5 and DO2.2.9 – deleting the reference to 'significant'.

   f) Deleting the Slope Instability Area 3 rules in relation to structures, new residential units, additions to existing residential units and accessory buildings, with consequential amendments to the Slope Instability Area policies.

   g) Minor amendments to the earthworks rule in Slope instability Area 3.

   h) Recommending a possible streamlined process under a controlled activity framework for sites with existing recent geotechnical assessments.

4. Expert conferencing is scheduled to occur after the release of this report. This may result in further changes to the recommendations made in this report. Where that occurs, those matters will be addressed in an addendum to this report to be provided in advance of the Hearing.

3.0 Acronyms and Abbreviations

Abbreviation	Full Text
PC29	Plan Change 29 to the Nelson Resource Management Plan
Panel	PC 29 Hearings Panel
RMA	Resource Management Act 1991
NRMP	Operative Nelson Resource Management Plan 1997
DNP	Draft Whakamahere Whakatū Nelson Plan
RPS	Operative Nelson Regional Policy Statement 1997
FDS	Nelson Tasman Future Development Strategy 2022-2052
MDRS	Medium Density Residential Standards prescribed in Schedule 3 of the RMA
MfE	Ministry for the Environment
NZCPS	New Zealand Coastal Policy Statement 2010
NCC	Nelson City Council
NES	National Environmental Standard
NPS	National Policy Statement
NPSUD	National Policy Statement Urban Development 2020 (updated 2022)
Council	Nelson City Council
GRZ	General Residential Zone
MDRZ	Medium Density Residential Zone
HDRZ	High Density Residential Zone

4.0 Introduction to the Report

4.1 Purpose of the report

5. A total of 1,492 submission and further submission points were received in relation to the natural hazard provisions. Original submission points totalled 702 with 790 being further submission points.

6. The purpose of this report is to evaluate the submissions and further submissions on PC29 in relation to the proposed natural hazards provisions, including in particular:

   a) The need for the new natural hazard overlays;

   b) The spatial extent of the proposed natural hazard overlays;

   c) The proposed issues, objectives and policies of the natural hazard overlays as they relate to land use activities, built form and development;

   d) The natural hazard rules applying in the overlays, including subdivision; and

   e) Supporting definitions.

7. The recommended amendments to the provisions of PC29 arising from the assessment of submissions in this report are included in the consolidated S42A version of PC29 available on the PC29 Hearing website. Each section of the report below also states the recommended amendments in relation to the issue discussed.

8. The report has been prepared in accordance with the requirements of S42A of the RMA, is intended to assist the Panel to make decisions on the submissions and further submissions on PC29 and should be read in conjunction with the S42A report – Overview and Strategic.

9. The conclusions reached and recommendations made in this report are not binding on the Panel. It should not be assumed that the 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.

10. Appendix 1 of this section 42A report provides the list of submission and further submission points addressed in this report and the recommendations for each to accept, accept in part, or reject.

4.2 About the Authors

11. This is a joint report from Sue Robb and Janice Carter, who have both contributed to the natural hazard provisions of PC29.

4.2.1 Sue Robb (Coastal and River Flood Hazards and Stormwater)

12. I am employed by the Council as a Senior Planning Advisor in the Environmental Planning team. My qualifications include a Bachelor of Urban and Regional Planning (Hons) from the University of New England (New South Wales, Australia) and a Master of Engineering Science (Project Management) from the University of New South Wales, Australia. I am a Registered Planner with the Planning Institute of Australia.

13. I have over 25 years' experience working as a resource management planner. Five years of this being in Aotearoa New Zealand. My work has included various resource management and policy positions in local government in both New South Wales (NSW) and Aotearoa New Zealand. I am familiar with, and experienced in, the processing of resource consents (and the NSW equivalent), the preparation of comprehensive plans, plan changes and the principles of land use planning. Through my work in both Australia and Aotearoa New Zealand I have experience in natural hazards and the development of plans, policy (including associated mapping) and the assessment of development proposals.

14. Although this is a Council Hearing, I confirm that I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2023 and that I have complied with it when preparing this report. Other than when I state that I am relying on the evidence of another person, this evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

4.2.2 Janice Carter (Slope instability, Liquefaction and Fault Hazards)

15. I am employed by Barker & Associates Limited as a Senior Associate. I have been in this position since September 2019. My qualifications include a Bachelor of Science in Geology and Geography from the University of Canterbury and a Master of Science (Hons) (Resource Management) also from the University of Canterbury. I undertook masters level engineering geology papers in applied hydrology, slope stability and natural hazards as part of my Master's degree. I am a full member of the New Zealand Planning Institute.

16. I have approximately 30 years' experience as a resource management planner and have been employed in a range of planning roles in private consultancies and local government.

17. I have been providing councils with advice in relation to resource management planning for natural hazards since 2004. I have also been involved in district plan reviews and plan changes with natural hazards as a component which included the presentation of evidence to the Council, hearings and the Environment Court. Previously I was seconded to the Christchurch City Council to assist in the preparation of the proposed Christchurch District Plan where I was specifically involved with the drafting of the Natural Hazards chapter and in presenting evidence to the Independent Hearings Panel. I was also involved in preparing natural hazard and climate change provisions for the Proposed Waikato District Plan, and prepared section 42A report for specifically on flooding and defended areas (areas behind stopbanks). I have undertaken numerous site visits and meetings in relation to the topic subject of this report. This included more recent site visits with Dan Chamberose to assess submissions and further submissions on slope instability and faults.

18. Although this is a Council Hearing, I confirm that I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2023 and that I have complied with it when preparing this report. Other than when I state that I am relying on the evidence of another person, this evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

4.3 Supporting evidence

19. In preparing this report the following expert evidence has been relied upon:

4.3.1 Flooding – Coastal and River and Stormwater

a) Damian Velluppillai, Tonkin and Taylor – Senior Water Resources Engineer; and

b) Toby Kay, Council – Activity Engineer – Stormwater and Flood Protection.

Note
The capacity of the stormwater network is addressed in the evidence of Alec Louverdis' evidence. Stormwater flow (overland flow), river, stream and tidal flood has been included in the evidence of Damian Velluppillai and Toby Kay.

4.3.2 Slope instability, Liquefaction and Faults

20. Dan Chamberose, BECA - Geotechnical engineer - Slope instability, faults and liquefaction.

5.0 Statutory Requirements

5.1 Statutory documents

21. Sections 5 to 10 of the Section 32 report for PC29 provides an overview of the relevant statutory considerations applicable to PC29. Those sections also set out the relationship between sections of the RMA and higher order documents, i.e. relevant iwi management plans, other relevant plans, and strategies. This is also addressed broadly in the Section 42A report – Overview and Strategic.

22. We have not repeated the detail of the relevant RMA sections and the full suite of higher order documents here. However, of particular relevance to this report is Section 6 of the RMA which contains the matters of national importance that are required to be recognised and provided for including Section 6(h) - the management of significant risks from natural hazards.

23. Sections 31 of the RMA also provides territorial authorities, amongst other things, with the following function:

> *31(1)(b) the control of any actual or potential effects of the use, development, or protection of land, including for the purpose of-*
>
> *(i) the avoidance or mitigation of natural hazards;*

24. The relevance of the NPS-UD has been outlined in the Section 42A Report - Strategic Overview, but for completeness it is noted that Policy 1(f) requires that well-functioning urban environments are resilient to the likely current and future effects of climate change. This is given effect to in PC29 through retaining NRMP zoning for areas potentially susceptible to significant natural hazards and including new natural hazards provisions to acknowledge the updated technical information on natural hazards now available which have climate change assumptions included. This is also consistent with the requirements of s6(h) and s31 of the RMA outlined above.

25. The assessment of submissions on the issues below addresses the relevant statutory tests detailed in the Section 32 Report as necessary.

5.2 Nelson Regional Policy Statement

26. The RPS sets out the overall strategic framework for achieving integrated management of the natural and physical resources of the region. Chapter 6 is Development and Hazards, and its relevant objectives and policies are summarised below:

a) Assess the costs and benefits of urban expansion according to the susceptibility to natural hazards and avoid inappropriate development in hazard prone areas. Where this is not practical or achievable avoid adverse environmental effects to the extent practicable.

b) Prioritise avoiding or mitigating hazards which threaten human life first, and property or other values second and prohibit developments in hazard prone areas which increase the potential for loss of human life or which result in potential damage to other resources and values which cannot be avoided or adequately mitigated.

c) Only permit development in hazard prone areas where the hazard will be avoided or adequately mitigated. Council will take into account the appropriateness of a site, the

types, levels, and potential increase of risk including to human life, property and other costs, and any measures that can be taken to avoid, remedy or mitigate adverse effects of the development (both on and off site).

d) Only undertake physical works to avoid or mitigate the adverse effects of natural hazards, where Council is satisfied as to the need for the work, available means of avoiding, remedying, or mitigating effects on the environment; the costs and benefits of alternative means of achieving the desired outcome including the 'do nothing' option; and the potential to offset adverse effects through environmental compensation.

e) Decline consent to inappropriate development in hazard prone areas, or require remedial or mitigation measures to avoid adverse environmental effects of natural hazards.

5.3 Section 32AA evaluation

27. This report uses key themes to group, consider and provide reasons for the recommendations on similar matters raised in submissions. Where the recommendations involve proposed changes, an evaluation using section 32AA of the RMA is included. The section 32AA further evaluation for each key matter considers:

a) Whether the amendments proposed in this section 42A report to objectives are the most appropriate way to achieve the purpose of the RMA;

b) Whether any amendments proposed in this section 42A report to other provisions are the most appropriate way to achieve the objectives, including by consideration of other reasonably practicable options for achieving the objectives;

c) The efficiency and effectiveness of the amendments proposed in this section 42A report to other provisions in achieving the objectives.

28. The section 32AA further evaluation contains a level of detail that corresponds to the scale and significance of the anticipated effects of the changes that have been recommended in this report. Recommendations on editorial, minor and consequential changes that improve the effectiveness of provisions without changing the policy approach are not re-evaluated.

5.4 Procedural matters

29. The report authors have attended a series of meetings with submitters to better understand the issues they raise and to clarify the intent of their recommended amendments to the PC29 provisions. I refer to these discussions where relevant in the report below. We have met with the following submitters:

a) Kāinga Ora [S933] (Sue Robb, Coralie Barker and Rachel Morgan);

b) Toka Tu Ake (EQC) [S203] (Janice Carter and Sue Robb);

c) National Public Health Service - Nelson Marlborough, Te Whatu Ora (NPHS-NM) - (Te Whatu Ora) [S709] (Janice Carter and Sue Robb);

d) Mark Lile for North Nelson Limited S755; Suffolk Heights Limited S768; Bayview Nelson Limited S767; 588 Limited S766; GP Investments Limited S845 (Janice Carter, Coralie Barker and Rachel Morgan).

6.0 Background and context

6.1 Background

6.1.1 General Natural Hazards

30. PC29 seeks to enable housing intensification within Nelson's existing urban area, however, it also recognises and provides for the management of significant risks from natural hazards. Much of Nelson's urban area is susceptible to one or more natural hazards such as flooding (coastal or river), liquefaction, active faults, or slope instability.

31. Over recent years the Council has obtained a substantial amount of new information on natural hazards including new or updated assessments of coastal and river flood hazard, liquefaction, slope instability and faults. The new and updated assessments (including mapping) cover the whole Nelson region and identify a much larger number of properties both within the region, and within Nelson's urban area, than are identified in the NRMP as being susceptible to natural hazards. This technical information has informed PC29.

32. In addition, the August 2022 Severe Weather Event reinforced the importance of planning for natural hazards, with many areas of Nelson sustaining significant flooding and landslip induced damages.

33. There are two natural hazards components of PC29:

    a) New residential zones proposed as part of PC29 (where residential intensification will be enabled) will not include areas that are susceptible to the following natural hazards:

        i. areas identified to be potentially susceptible to a 1% AEP event with sea level rise under a greenhouse gas emissions scenario of SSP 8.5(H+) at 2130 including VLM;

        ii. areas identified as requiring further assessment in relation to flood or being potentially susceptible to both high river flood levels and coastal flood; and

        iii. the area commonly known as the Tāhunanui Slump.

    b) New natural hazards provisions, including natural hazard overlays to manage land use and development in Nelson's urban areas, where the land is identified as being potentially susceptible to one or more natural hazards.

34. Sections 12.8 and 12.10 of the Section 32 Report contain further detail on the approach.

35. The new technical information on areas affected by natural hazards in Nelson is shown in the PC29 Natural Hazard Overlays and are identified below. It is noted that where the updated technical information does not cover areas already included in the NRMP, these older overlays have been carried over in PC29. The Overlays include:

    a) Flood Hazard Overlay;

    b) High Flood Hazard Overlay;

    c) Floodway Overlay;

d) Inundation Overlay;

e) Food Path Overlay;

f) Flood Overlay;

g) Faults Deformation Overlay;

h) Fault Awareness Overlay;

i) Liquefaction Hazard Overlay;

j) Slope Instability Area 1 Overlay;

k) Slope Instability Area 2 Overlay;

l) Slope Instability Area 3 Overlay;

m) Debris Run-out Area Overlay.

7.0 Issues arising or changed since notification

36. On 18 September 2023 the Government released a consultation draft Proposed National Policy Statement for Natural Hazard Decision making (NPS – NHDM). While this draft Proposed NPS has no status it signalled the intent of the Government to provide a national policy statement on natural hazards as it relates to new development to enable grater consistently in the treatment of natural hazards under the RMA nationally.

37. Of note in the draft was the absence of the wording 'significant risk' which is included as a matter of national importance in Section 6 (h) of the RMA. Policy 1 currently states that "When making planning decisions, decision-makers are to determine the level of natural hazard risk as high, moderate, or low. Policy 2 currently states (in summary) that when determining natural hazard risk, decision-makers are to consider, first, the likelihood of the natural hazard event occurring, and the consequences; and second, tolerance to a natural hazard event. Policy 3 states that decision-makers must adopt a precautionary approach when determining natural hazard risk if (in summary) the natural hazard risk is uncertain or little understood; and the risk could be intolerable.

38. Submissions on the NPS – NHDM closed on 20 November 2023 and submissions are being heard by the select committee. Consequently, it is unknown what changes might be made to the NPS – NHDM. While it is useful to be aware of what direction the Proposed NPS – NHDM was taking, it is not yet gazetted and does not currently form Government policy.

39. The Ministry for the Environment (MfE), February 2024, Coastal hazards and climate change guidelines was published on 29 February 2024. It is an update to the 2017 Coastal hazards and climate change: guidance for local government. The MfE 2024 Guidance also updated MfE's Interim guidance on the use of new sea-level rise projections released in 2022.

40. The key notable updates in the MfE 2024 guidance are:

    a) Advances in sea-level rise science and updated global projections from the IPCC's Sixth Assessment Report;

    b) New relative sea-level rise projections and vertical land movement estimates from the NZ SeaRise Programme;

    c) Advances in knowledge relating to the types of coastal hazards (such as sea-level rise, storms, flooding, or rising groundwater) and how they interact with each other;

    d) Updated guidance on carrying out risk assessments and adaptation pathways planning.

41. Table 8 in the guidance sets out Interim precautionary relative sea-level rise allowances recommended for coastal planning and policy before undertaking a dynamic adaptive pathways planning approach for a precinct, district or region. This table is very similar to Table 3 Recommended updates to the minimum transitional procedures or RSLR allowances of the Interim guidance on the use of new sea-level rise projections (2022). The Interim guidance on the use of new sea-level rise projections (2022) and its consideration in relation to PC29 is outlined in the Section 32 report including the application of data from the NZ SeaRise Programme.

8.0 Consideration of submissions and further submissions

8.1 General natural hazard submissions received

42. Numerous submissions and further submission points were made in relation to general natural hazards issue including climate change matters.

43. The submissions and further submissions raise a broad range of matters that relate to PC29 and the relationship between intensification and natural hazards, and other Council planning functions. Many of the submission/further submission points in this section did not seek specific changes to PC29.

44. The themes raised in respect to the general natural hazard matters are as follows:

a) Support for and opposition to the natural hazard approach (including overlay mapping and housing intensification;

b) Submitters who consider that GRZ should be the maximum intensification applied in natural hazard areas, or no intensification at all, including removal of the HRDZ in all natural hazard areas, or no building in flood or fault hazard areas;

c) PC30 and its overlap with PC29; and

d) Other matters.

8.2 Support for and opposition to the natural hazard approach (including overlay mapping and housing intensification

8.2.1 Notified PC29

45. The approach to natural hazards in PC29 is provided in the Section 42 Report - Strategic and Overview and in the Section 32 Report. The risks of natural hazards in the current urban area of Nelson is an important consideration for housing intensification. The Council has been working over a number of years to update its technical natural hazards information including new coastal and flood modelling, and slope instability, fault hazard and liquefaction geotechnical assessments (See Section 5.1 of this report). This information has been developed into natural hazard overlays in respect to flooding, slope instability, faults and liquefaction and associated planning provisions as part of PC29.

8.2.2 Submissions

46. Transpower [S198.054] supports the spatial extent of the natural hazard overlays proposed by PC29 as notified. Transpower considers that the identification of natural hazard overlays in the planning maps provides users of the Resource Management Plan with certainty about the location and extent of the application of the proposed natural hazard rules. Tasman District Council [S879.011] considers that the approach to require resource consents for a range of activities should be retained where there are natural hazards considerations so the risks can be appropriately managed.

47. The following submitters generally support the natural hazards mapping included in PC29: Sarah Little [S610.002], Unit Support Committee No.23 (Nelson) Squadron Air Training Corp New Zealand Cadet Forces [S780.001]. In particular, Small Time Developments [S580.005] states its support for the updated Natural Hazard overlays to incorporate updated information.

48. Solitaire Investments limited [S459.004] is generally supportive of the way natural hazards have been identified but request no significant changes to the existing operative plan that would significantly impact way land can be developed in the future. They state this because their land has a number of natural hazards identified, including the Slope Instability Areas 2 and 3 Overlay, the Debris Run-out Overlay, and the Fault Deformation Overlay, which they have been taking into account in their design subdivision layouts to date. Two further submissions in partial opposition (but generally opposing the natural hazard overlays) from Suffolk Heights Limited [FS49.001] and Sarah Holman [FS78.532] were received.

49. Richard Harden and Rachel Reece [S895.001] seek accurate mapping of natural hazards, specifically earthquake fault lines/zones/overlays, and potentially slope instability, and to remove these areas from our property and surrounds in Allan Street. A number of further submissions in support were received to this submission point (see Appendix 1).

8.2.3 Evaluation

50. A number of submissions are in support of the approach[1] (including the natural hazards overlay mapping). The approach is identified in section 5 and 8. Since I am not recommending changes to this overall approach, I recommend that these submissions be accepted.

51. The submission by Unit Support Committee No.23 (Nelson) Squadron Air Training Corp New Zealand Cadet Forces [S780.001] which seeks retention of planning maps is also accepted in part to the extent that there are some changes to the natural hazard planning maps to address other submitters concerns.

52. Solitaire Investments limited [S459.004] are generally supportive of the identification of the natural hazard overlays, but would be concerned if the provisions significantly impact the way land can be developed in the future. It is my view that the provisions applying to Solitaire's land holdings enable their land to be developed and in some cases to a greater intensity that provided for in the operative plan. Solitaire may wish to expand on their submission at the hearing so I can fully understand their concerns in respect to the related provisions. Accordingly, I recommend that the submission of Solitaire be rejected at this stage. I also recommend that the further submissions of Suffolk Heights [FS49.011] and Sarah Holman [FS78.532] and in partial opposition also be rejected.

53. The submission from Richard Harden and Rachel Reece [S895.001] is addressed at paragraph 5.21 in the evidence of Dan Chamberose. I agree with Mr Chamberose that the slope instability and other overlays cannot supersede site specific hazard/risk assessments that have previously been completed at a site and that is not the purpose of the overlays. Overall, it is not appropriate to remove a property from the overlay due to a geotechnical report addressing a specific development at the site. Consequently, I recommend that this submission point be rejected. The

[1] S198.054, S879.011, S203.001, S610.002, S780.001, S580.005

further submission points in support of this submission point are also recommended to be rejected and are recorded in Appendix 1.

8.2.4 Recommendations

54. I do not recommend any changes to PC29 as a result of these submissions.

8.2.5 Section 32AA evaluation

55. As no changes are recommended to PC29 as a result of these submissions no further evaluation is required under S32AA.

8.3 No intensification in natural hazard areas

8.3.1 Notified Plan Change 29

56. The approach to natural hazards in the notified PC29 is discussed in section 5 and 8 of this report, and in the s32 report so I will not repeat that again here.

8.3.2 Submissions

57. Toka Tū Ake EQC [S203.001] and June Laird [S707.004] support not zoning residential intensification areas that are susceptible to natural hazards, in particular those areas in which the risk of natural hazards is likely to increase in the near future such as coastal inundation exacerbated by sea level rise or the active Tāhunanui Slump. Rosemary and John Bealing [S690.007] seek that earthquake fault lines, together with land subject to rising sea levels, liquefaction and flooding should be avoided. Similarly, Zero Carbon Nelson Tasman [S324] (all natural hazards), Chris and Sandra Sutcliffe [S161.009] and Benjamin Plows-Kolff [S578.007] (flood prone land), and Nicola Hawes [S727.013] request that development is restricted in areas of natural hazard. Alison Oertly [S85.005] requests that the Council take natural hazard risks seriously and create appropriate building restrictions.

58. A large number of submitters considered that high density or an increase in current density (intensification) for housing was inappropriate in natural hazard areas with one submitter Janet Southwick (S740.016) saying that it was irresponsible to plan 'high density in all natural hazard overlays'. This group of submitters consider that the General Residential should be the maximum intensification applied in natural hazard areas (see submission points to this issue in Appendix 2), or that no increase in current density should be provided for. Pauline Allen [S784.009] and David Allen [S786.009] seek retention of the present Residential Zone in areas with natural hazard risks.

8.3.3 Evaluation

59. The submissions that generally requested that development is restricted in all areas of natural hazards are recommended to be rejected, as this position does not take into account the nature and severity of the hazard in a location, or whether there are appropriate mitigation methods available. There may be areas of natural hazards that development would be inappropriate and these have generally been identified in this plan change (Slope Instability Area 1 (Tāhunanui Slump), low lying coastal areas and some parts of the High Flood Overlay.

60. A number of submitters considered that high density or an increase in current density (intensification) for housing was inappropriate in natural hazard areas and that GRZ should be the maximum intensification applied in natural hazard areas. Some of these issues are discussed in

more detail in the sections 9-12 of this report. Generally, however, whether high density, or an increase in density at all, is appropriate in natural hazard areas depends on many factors including the level of risk, the type of hazard and the potential for mitigation, including development costs. Many of these issues are addressed in the associated rules that apply in the various natural hazard overlays. Accordingly, I recommend that these submission points[2] be rejected. However, I note that the HDRZ is proposed to be deleted through recommendations in another report, which may provide some relief to these submitters.

8.3.4 Recommendations

61. I do not recommend any changes to PC29 as a result of these submissions.

8.3.5 Section 32AA evaluation

62. As no changes are recommended to PC29 as a result of these submissions no further evaluation is required under S32AA.

8.4 Plan Change 30 and its overlap with PC29

8.4.1 Notified PC29

63. Nelson Airport has promoted a private Plan Change (PC30) and Notice of Requirement process in support of upgrades required to the Nelson Airport northern runway. PC30 is currently being heard but has been adjourned. PC29 was notified after PC30 and proposed to apply new natural hazard provisions to the Industrial Zone in which the Nelson Airport is located. PC30 seeks an Airport Zone and applies the operative NRMP natural hazard provisions. Submitters to PC29 raise concerns about the integration of the two plan changes.

8.4.2 Submissions

64. The Nelson Air Training New Zealand Cadet Forces [780.002, S780.005] seek that the provisions relating to hazards in the current industrial zone (INr.59, INr.60, INr.60A – INr.60F) be considered in conjunction with PC30 Airport proposed rules, including, in particular, changes to rules in relation to minimum floor levels for new or existing buildings.

65. Nelson City Council [847.004] makes a similar submission in respect to Plan Change 30 to ensure that PC29 natural hazard provisions will apply to Nelson Airport. The submission states that Plan Change 29 makes changes to the rules that apply to the Industrial Zone that are intended to also apply to the Airport. Any change of zoning for the Airport should carry over the Plan Change 29 provisions. This is needed to ensure the Plan Changes are integrated, and provides flexibility for this to occur regardless of the timing of either Plan Change being made operative. Further submissions from Nelson Airport Limited [FS28.160] and Melinda and Craig Harvey [FS83.284] in support in part, and in opposition, respectively, are identified in the accept/reject table to the Industrial Zone.

66. Further submissions were received from Tahuna Beach Camp [FS51.007] in opposition to the submission of Nelson Airport [478.007].

[2] S740.016, and the submission points contained in Appendix 2.

8.4.3 Evaluation

67. In respect to the submission of Unit Support Committee No.23 (Nelson) Squadron Air Training Corp New Zealand Cadet Forces [S780.002] and Nelson City Council [S847.004] I note that Nelson Airport's private PC30 has been adjourned, but the issue of the natural hazard provisions in both plan changes were the subject of evidence presented at the hearing. Rules INr.59, INr.60, INr.60A – INr.60F referred to above are part of PC29 and provide the most up to date flood provisions for Whakatū Nelson. I consider it appropriate that consideration of the natural hazard provisions in the two plan changes should be done in an integrated manner to ensure that the most up to date rules in PC29 are applied to the proposed airport upgrades and do not get inadvertently sidelined because PC30 promotes an Airport Zone rather than an Industrial Zone.

68. Given that PC30 has been adjourned it is now likely that PC29 will be decided ahead of PC30. Recommendations made for the natural hazard rules in PC29 can, in my view, be carried over to the new Airport Zone, in evidence, given the submission Nelson City Council has made to PC30. In light of this I recommend that the submissions of Unit Support Committee No.23 (Nelson) Squadron Air Training Corp New Zealand Cadet Forces [S780.002, S780.005] and Nelson City Council [S847.004] be accepted. The further submission from Nelson Airport [FS28.160] is recommended to be accepted in part, and the further submission of Melinda and Craig Harvey [FS83.284] is recommended to be rejected.

69. Further submissions were received on these submissions points and recommendations on them are provided in Appendix 1.

8.4.4 Recommendations

70. I do not recommend any changes to PC29 as a result of these submissions.

8.4.5 Section 32AA evaluation

71. As no changes are recommended to PC29 as a result of these submissions no further evaluation is required under S32AA.

8.5 Other matters

8.5.1 Submissions

72. New Zealand Institute of Architects [S495.015] seek clarification on whether partial encroachment of a Hazard Overlay on a property title will trigger the need for a full assessment or if this is only required in situations where the proposed building zone is within the hazard overlay. One further submission was received from EQC Toka Tū Ake [FS73.045].

73. National Public Health Service - Nelson Marlborough, Te Whatu Ora [S709.021] request that "significant risk" and "risk to people" be defined in PC29 in relation to risks from natural hazards and align the wording with what is proposed in the NPS-NHDM and make consequential amendments to the natural hazards provisions to reflect the definitions. Te Whatu Ora [S709.022] also request alignment with the proposed NPS-NHDM, including policies 1-4; using social vulnerability indicators and point locations when identifying areas susceptible to natural hazards. Two further submissions from Toka Tū Ake EQC [FS73.047, FS73.048] in support of the submissions of Te Whatu Ora [S709.021, S709.022] and one in opposition from Kainga Ora

[FS56.093] were received. The further submission from Kainga Ora [FS56.093] considered that the proposed NPS – NHDM is at a draft stage, has no legal effect and is subject to change.

8.5.2 Evaluation

74. To clarify the request from the New Zealand Institute of Architects [S495.015] I note that the proposed provisions only relate to the area of land within the overlay. This is to ensure that if a property is large and only a small portion is affected by the overlay it does not trigger the rules for the remainder of the site. The actual mapping ensures this. Historically district plans were cadastral fixed which means that the natural hazard boundaries on the planning maps were snapped to cadastral boundaries. With modern digital information this is no longer necessary. Like the other overlays in the plan the overlay provisions apply where the overlay falls. I consider that this situation is clear in the plan at AD11.3.i and needs no further explanation. I recommend that the submission of the New Zealand Institute of Architects [S495.015] be accepted. The further submission from EQC Toka Tū Ake is rejected as this further submission suggests that areas proximal to the overlay should also be captured by the rules that apply.

75. In respect to Te Whatu Ora [S709.021 S709.022] I do not consider it appropriate to define “significant risk" and "risk to people" or to align with the proposed NPS-NHDM. As discussed in section 5.2 of this report, I consider it useful to be aware of the direction the Proposed NPS-NHDM is taking, but it is not yet gazetted and does not currently form Government policy, and more importantly does not use the term ‘significant risk’ in its policies. Accordingly, I recommend that Te Whatu Ora [S709.021 S709.022] is rejected. I also recommend that the further submissions in support from Toka Tū Ake EQC [FS73.047, FS73.048] are also rejected. The further submission in opposition from Kainga Ora [FS56.093] can be accepted.

8.5.3 Recommendation

76. I do not recommend any changes to PC29 as a result of these submissions.

8.5.4 Section 32AA evaluation

77. As no changes are recommended to PC29 as a result of these submissions no further evaluation is required under S32AA.

8.6 General comments (no relief sought)

8.6.1 Submissions

78. Other submitters point to potential aspects that may not have been considered in the natural hazards approach or make generalised statements about the natural hazards in the Nelson environment or the natural hazard provisions proposed. These submitters do not specifically seek changes to PC29:

a) Write rules from a precautionary perspective that make sure people are not put in harm's way -Zero Carbon Nelson Tasman [S324.003];

b) Do not permit the storage of hazardous substances in any zone exposed to natural hazards such as flooding, land slip or liquefaction - Nelson Tasman Climate Forum [S512.010];

c) Take into account individual area risks - Ainslie Riddoch [S882.002];

d) Provide for intensification on the Tāhunanui Flats - Charles Douglas [S619.002];

e) Given Nelsons City's natural hazards/obstacles, like liquefaction and an earthquake fault line running through the city, shorter more compact townhouse terrace house developments provide an opportunity for larger surface to height ratio to mitigate risks – Richard Hite [S437.004];

f) Development needs to consider ways to mitigate these risks - Mary McKinlay [S409.033];

g) Manage the parts of Nelson that are susceptible to natural disasters - Greg Hornsby [S528.002];

h) When identifying and progressively staging development that hazard zones are taken into account - Joanna Plows (S816.017);

i) Cross map neighbourhoods with hazard overlays based on more precision than the notified natural hazard overlays - Rob Harris [S411.002];

j) Determine the best siting for residential development that would avoid areas of extreme natural hazards - Cathy Nicholson [S322.007];

k) Up to 3 dwellings on a site be allowed on Flood and Liquefaction prone land as long as they are simple relocatable tiny houses - Nelsust Inc. - Peter Olorenshaw [S608.003];

l) Consider the medium-term natural hazard of an AF8 rupture of the Alpine Fault - Resilienz Ltd - Lindsay Wood [S625.007].

8.6.2 Evaluation

79. A number of the submission points outlined above, align with the intent of PC29 natural hazards approach. I therefore recommend that these submission points[3] be accepted.

80. Submission points which are visionary or cannot be dealt with in a land use planning context, appear to consider the approach not robust enough, or consider the approach inaccurate[4] but have not specifically requested changes to PC29 are recommended to be rejected. Further information could be provided at the hearing which may enable specific points in this group to be reconsidered.

8.6.3 Recommendation

81. I do not recommend any changes to PC29 as a result of these submissions.

8.6.4 Section 32AA evaluation

82. As no changes are recommended to PC29 as a result of these submissions no further evaluation is required under S32AA.

[3] S324.003, S322.007, S882.002, S409.033, S528.002, S816.017, S608.003, S437.004, S625.007

[4] S512.010, S619.002, S411.002

8.7 General natural hazard objective

8.7.1 Notified PC29 - Objective DO2.2

83. The notified natural hazards and climate change Objective DO2.2 is outlined below:

> DO2.2 natural hazards: General Residential Zone, Medium Density Residential Zone, High Density Residential Zone, Inner City Residential Zone and Suburban Commercial Zone
>
> *Risks to Whakatū Nelson's people, property and infrastructure from natural hazards, including the effects of climate change, are recognised and managed and significant risk is avoided.*

8.7.2 Submissions

84. Transpower New Zealand Limited [S198.015] and Fire and Emergency New Zealand [S589.024] support the objective and policy framework and seek that it be retained as notified. In respect to Objective DO2.1 and DO2.2 Nelson Airport Limited [S478.004, S478.005] request that the Industrial Zone and NRMP residential zones be included in the respective headings (including the heading to DO2.1). Te Whatu Ora [S709.020] seeks generally that provisions in DO2 Natural Hazards be amended to replace reference to human health and safety with 'human wellbeing'.

85. Te Whatu Ora [S709.035] also seek an amendment to DO2e – environmental results anticipated.

86. Zero Carbon Nelson Tasman generally supports DO2.1[S324.004] and seeks amendments to associated policies [S324.009] including DO2.1.2iii. to recognise that the Building Act may not be sufficient during seismic amplification to address the effects of liquefaction. It further seeks amendment to DO2.1.1i to include that the natural environment needs protecting [S324.006] and the extinguishing of existing use rights [S324.005]. Its submission to amend DO2.1.2.ii relates to the storage and use of hazardous substances in any zone in exposed to natural hazards [S324.007]. Zero Carbon further seeks to amend DO2.1.2.vi so that] new builds are not permitted in inundation and flood hazard zones [S324.010].

87. The recommendations for the further submissions received in relation to the above submissions are contained in Appendix 1.

8.7.3 Evaluation

88. I[5] consider that the exclusion of the Industrial Zone and the operative NRMP Residential Zones is a plan error. The new natural hazard provisions apply across all residential zones and the Industrial Zone, and making this amendment clarifies the intent of PC29. Consequently, I recommend that the submission points by Nelson Airport Limited [S478.004, S478.005] and the further submissions in support by Toka Tū Ake EQC [FS73.010,] FS73.011] be accepted. The recommended amendments in respect to these submission points are included below.

89. It is noted that PC29 does not seek to provide any changes to DO2.1.1, DO2.1.2ii, DO2.1.2iii or DO2e and these requests from Te Whatu Ora [S709.020, S709.035] and Zero Carbon Nelson Tasman [S324.010, S324.009, S324.006, S324.004 and S324.005]. Regardless of whether the submission is determined to be out of scope, I recommend that the request from Te Whatu Ora [S709.035] to amend DO2e Environmental results anticipated and performance indicators be

[5] Janice Carter is the author of this section.

rejected as I consider them unnecessary for this PC29. However, I note that approach being suggested by Te Whatu Ora is potentially best addressed as part of the climate change adaptation work. It is my understanding that this work will consider each of the environments and develop indicators, triggers for adaptation pathways, and implementation strategies. The submissions of Zero Carbon Nelson Tasman [S324.010, S324.009, S324.006, S324.004 and S324.005] are also recommended to be rejected for the same reasons.

90. The recommendations on the further submissions to these submissions are in Appendix 1.

91. However, in respect to Te Whatu Ora [S709.020] DO2.2 does form part of PC29 so I have specifically considered whether the words 'human well being' could be inserted. DO2.2 as proposed in PC29 does not include any reference to human health and safety in which to substitute the words 'human well-being'.

92. Overall, I consider 'human well-being' does not need to be added to the objective in this instance. Risks to 'people' as stated in the objective at present, in my view, is general/holistic and includes risk to well- being. There is no specific reference that would limit it only to life or injury. Consequently, I recommend that this submission point from Te Whatu Ora [S709.020] be rejected.

93. I recommended that the submissions points of Transpower New Zealand Limited [S198.015] and Fire and Emergency New Zealand [S589.024] be accepted in part as the objective and policy framework is largely being retained.

94. In terms of Zero Carbon Nelson Tasman's submission point [S324.009], the statement in DO2.1.2iii outlines a method to control foundation construction in areas prone to seismic amplification (the Building Act). I do not support any changes to this statement and I recommend (whether it is considered out of scope or not), that this submission point be rejected.

8.7.4 Recommendations

95. With the exception of the request of Nelson Airport [478.004] to include the Industrial Zone and operative NRMP Residential Zones in the headings to DO2.1 and DO2.2 no submissions seek provide actual changes to the wording of the new natural hazard objective (DO2.2). Consequently, I recommend that the wording of objective DO2.2 be retained as notified. I recommend that the heading to DO2.1 exclude the Industrial Zones and the operative NRMP residential zones and that DO2.2 be amended to include those zones.

96. In summary, in respect to the natural hazard objective, I recommend the following changes:

Provision(s)	Officer recommendations
Objective DO2.1 (heading only)	Amend as follows: DO2.1 natural hazards: all zones except Residential Zone, Standard Area, Comprehensive Area, Lower Density Area, General Residential Zone, Medium Density Residential Zone, High Density Residential

Provision(s)	Officer recommendations
	Zone, Inner City ~~Residential~~ Zone, Industrial Zone and Suburban Commercial Zone[6]
Objective DO2.2 (heading only)	Amend as follows: DO2.2 natural hazards: Residential Zone, Standard Area, Comprehensive Area, Lower Density Area, General Residential Zone, Medium Density Residential Zone, High Density Residential Zone, Inner City ~~Residential~~ Zone, Industrial Zone and Suburban Commercial Zone[7]

8.7.5 Section 32AA Evaluation

97. In my opinion, based on the analysis above, the above changes are to correct minor errors and provide clarification and do not change the content of the objective itself. I therefore consider no s32AA evaluation is required in this instance.

8.8 General natural hazards policy

8.8.1 Notified PC29 – Policy DO2.2.1

98. The notified natural hazards and climate change Objective DO2.2 is outlined below:

a) DO2.2.1 identify areas susceptible to natural hazards

Identify, as overlays in the Planning Maps, areas within the region that are susceptible to flooding, faults, liquefaction, and slope instability.

99. The policy requires areas within the region that are susceptible to flooding, faults, liquefaction, and slope instability to be identified as overlays in the Planning Maps. This has been given effect to in PC29 by 13 natural hazard overlays:

a) Flood hazard, High flood hazard, Floodways, Floodpaths, Inundation and Flood area overlays;

b) Slope instability area 1, 2 and 3, and Debris run-out overlay;

c) Fault deformation and Fault awareness Overlays; and

d) Liquefaction hazard overlay.

8.8.2 Submissions

100. Transpower New Zealand Limited [S198.016] request that Policy 2.2.1 be retained as notified.

[6] Nelson Airport [S478.004]; Toka Tū Ake EQC [FS73.010, FS73.011]

[7] Nelson Airport [S478.005]; Toka Tū Ake EQC [FS73.010]

101. Te Whatu Ora [S709.23] request the removal of 'if necessary' from DO2.2.1i (Explanation and Reasons). One further submission from EQC Toka Tū Ake [FS73.049] in support of Te Whatu Ora [S709.23] was received.

102. Manuka Street Hospital Limited [S881.006] has requested the amendment of the district wide objectives and policies DO2.2.1 and DO2.2.4 to require a more detailed analysis to identify areas prone to flooding.

8.8.3 Evaluation

103. I recommend rejecting the submission point from Te Whatu Ora [S709.23] to remove 'if necessary' from DO2.2.1i. I recommend that the words be retained as notified as some consent situations may not require assessment for instance a previous assessment may be appropriate for use.

104. In terms of the request by Manuka Street Hospital [S881.006] I am unsure how their request is intended to be reflected in the policy. The submitter may wish to clarify this at the hearing so that it can be considered further, in the meantime I recommend that this submission point be rejected.

105. Since I am not recommending any changes to changes to the policy, I recommend that the submission by Transpower New Zealand Limited [S198.016] be accepted.

8.8.4 Recommendations

106. I do not recommend any changes to PC29 as a result of these submission points on Policy DO2.2.1.

8.8.5 Section 32AA Evaluation

107. As no changes are recommended to PC29 as a result of these submissions no further evaluation is required under S32AA.

108. Consideration of submissions and further submissions – Coastal and River Flood Hazard and stormwater[8].

[8] This section of the report has been prepared by Sue Robb.

9.0 Consideration of submissions and further submissions– Coastal and River Flood Hazard and Stormwater [Sue Robb]

9.1 Overview of submissions received

109. A large number of submissions were made in relation to the coastal flood modelling (extent of PC29) and the objectives, policies, rules and flood overlays for river flood hazard and stormwater (relating to overland flow).

110. Given the large number of submissions received, this report focusses on the key themes raised. Having reviewed the submissions in detail, the following are what I consider to be the key matters in contention for this topic, and I therefore focus my analysis on these matters:

a) The spatial extent the coastal flood scenario 1% AEP event SSP 8.5(H+) (including VLM) and the scope of the plan change;

b) Flood Hazard – general matters;

c) The appropriateness of the flood hazard policies;

d) The appropriateness of the flood hazard rules, including definitions;

e) The robustness of the flood hazard modelling and mapping (overlays);

f) Site specific flood areas; and

g) Miscellaneous matters.

111. These key themes form the basis of my assessment below. For ease of reading, this report uses references to submission numbers sparingly and groups key submission points by themes.

112. My recommendations in relation to all submission points on this topic are included at Appendix 1.

9.2 Spatial extent of the coastal flood scenario 1% AEP event SSP 8.5(H+) (including Vertical Land Movement-VLM), river flood and the scope of PC29

9.2.1 Notified PC29

113. As stated in section 1.4 of the Section 32 report, PC29 applies to the Residential Zone, Inner City Zone, Suburban Commercial Zone, and Industrial Zone. Certain areas of the Residential Zone were not included in the opportunity for intensification for natural hazard reasons. Sections 1.5, 12.1, 12.9 and 15 of the Section 32 report outline the application of the coastal flood scenario 1% AEP event SSP 8.5(H+) (including VLM) in relation to the spatial extent of the PC29. Refer to the Section 32 report for a definition of VLM and Appendix 2E of that report for a description of the coastal flood scenario related to areas that are not included for intensification.

114. In relation to the management of coastal flood and PC29, Council has applied the sea level allowances for Category B in Table 3 in the MfE Interim Guidance to identify a coastal inundation area as there is no Council adaptation plan. Since the notification of PC29, the MfE have released the *Coastal hazards and climate change guidance, 2024* (as previously outlined in this report).

115. The maps in the Section 42A Report - Overview and Strategic illustrate the area subject to the residential intensification provisions and the PC29 extent including the areas not included due to the 1% AEP event SSP 8.5 (H+) (including VLM) scenario. The difference between the two is due to the approach outlined above.

116. Coastal hazards (coastal flood, storm surge, coastal erosion and tsunami) except for the application of 1% AEP event SSP 8.5 (H+) (including VLM) for the extent of PC29 were not included in PC29 (refer to Part 2 of the Section 32 report). Storm surge is defined as being a 'temporary increase in sea level induced by winds and barometric pressure associated with weather systems' (MfE, 2024, p142). In relation to coastal flood, it was considered that work beyond PC29 was required to prepare the overlay(s) and associated objectives, policies and rules. Tsunami modelling is not available for Nelson. Whilst civil defence tsunami evacuation maps are available for the Nelson these are not considered appropriate for inclusion in PC29.

9.2.2 Submissions

117. There were numerous submissions on this topic which have been grouped into four themes, these are:

a) Land potentially affected by the coastal flood scenario 1% AEP event SSP 8.5(H+) (including VLM) and a combination of coastal and river flood not being included in the PC29 areas with proposed residential intensification provisions;

b) The area known as The Wood in relation to future development or flood;

c) The inclusion of provisions in PC29 in relation to storm surge and tsunami; and

d) The inclusion of coastal flood mapping in PC29.

9.3 Land potentially affected by 1% AEP event SSP 8.5(H+) (including VLM) SSP5 and a combination of coastal and river flood not being included in the PC29 areas with proposed residential intensification provisions

118. Two submissions were received in relation to the application of land potentially affected by the 1% AEP event SSP 8.5(H+) (including VLM) SSP5 scenario and areas projected to be affected by this and not including intensification opportunities in this area. The submissions are: Toka Tū Ake EQC [S203.001] and Tasman District Council [S879.010]. Both submissions support the PC29 approach in relation to this and do not request change.

9.3.1 The Wood

119. The predominantly residential area of The Wood was not included in PC29 intensification provisions as much of it is subject to both river and coastal flood (refer to pps 37, 73, 75, 85 and 108 of the PC29 Section 32 report and the PC29 Flood Overlays). A large proportion of the area that is projected to be affected by river flood is categorised as High Flood Hazard (refer to p70 of the PC29 Section 32 report for a description of the flood hazard categories). It should be noted that the Operative NRMP or PC29 does not exclude development from occurring in The Wood.

120. In relation to The Wood, Wes Dayton [S99.002] requests clarification on the direction for The Wood. Richard Brudvik-Lindner [S460.019 and 020] states that the area should be protected from

climate change (built up as required) and that 3-4 storey level development should be allowed in The Wood. Similar to this, Gina Yukich [S302.002] requests consideration of whether flood hazard zones in The Wood should be excluded from high density developments. It is stated that "these developments have access to economies of scale and can allow for improvements of surrounding infrastructure to reduce potential impacts of flooding on residents".

9.3.2 The inclusion of provisions for storm surge and tsunami

121. Toka Tū Ake EQC [S203.002] has requested that the PC29 overlays include tsunami and coastal storm surge inundation maps and associated provisions to restrict development similar to those for flood hazard areas. It is stated that this relates to policy DO2.2.1 identify areas susceptible to natural hazards.

9.3.3 Coastal Flood mapping, inclusion in PC29

122. Kirsten Brown [S561.001] requests clarification of the Inundation Overlay mapping data to include inundation due to sea level rise, and include inundation attributed to sea level rise in the overlay if it is not already included.

9.3.4 Evaluation

Land potentially affected by 1% AEP event SSP 8.5 (H+) (including VLM) SSP5 (8.5H+) and a combination of coastal and river flood not being included.

123. As seen in the PC29 High Flood hazard and Flood Hazard overlays and the extent of PC29 (based on the 1% AEP event SSP 8.5 (H+) (including VLM) it is projected that some areas will be substantially affected by flood. As stated above, it is considered that coastal and river climate change adaptation work is required.

124. The Council is preparing an adaptation framework in alignment with the Dynamic Adaptive Policy Pathways Planning (DAPP) approach. The framework will support the creation and assessment of adaptative options and pathways to respond to coastal and associated river hazard risks. It is anticipated that this work will inform future changes to the NRMP and associated land use planning and engineering guidance documents.

125. It is also anticipated that legislation will be introduced to respond to the complex legal and technical issues associated with climate change, sea level rise and the resultant hazards. The consideration of anticipated new legislation and a policy statement on the management of natural hazards will be part of determining the direction for adaptation strategies and land use planning including for the area known as The Wood.

126. As with the other areas not included for residential intensification (refer to Section 15 Residential areas not eligible for Intensification of the Section 32 report), the coastal hazards, river flood and stormwater modelling and mapping (refer to the evidence of Damian Velluppillai, paragraphs 9-20), the Maitai River flood management work (refer to the evidence of Toby Kay, paragraphs 7.3 and 7.4) and coastal hazards change adaptation work being undertaken (as outlined above) will provide the opportunity to determine the direction for adaptation strategies and land use planning in these areas including The Wood.

127. I recommend that the submission points raised by [Toka Tū Ake EQC, S203.001] and Tasman District Council [S879.010] are accepted.

The Wood

128. As outlined above, climate change adaptation work is being undertaken including for The Wood. Toby Kay in his evidence (paragraphs 9.2 and 9.3) states that adaptation in this area (in particular the basin in the area north of Grove Street) is likely to be challenging and outlines some of the associated matters. Given this and the numerous matters requiring consideration in the climate change adaptation work, I support not upzoning The Wood until the adaptation work is completed as is the PC29 approach. I recommend the acceptance of the submission point of Wes Dayton [S99.002] and consider that the submission request has been addressed in this report. I recommend the acceptance of the submission request Richard Brudvik-Lindner [S460.019] as the area will be subject to climate change adaptation work. However, I recommend rejecting the submission points regarding allowing 3-4 storey level development or high density development in The Wood sought by Richard Brudvik-Lindner [S460.020] and Gina Yukich [S302.002]. The nature of future development will be considered as part of the climate change adaptation work.

Inclusion of provisions for storm surge and tsunami

129. As part of the climate change adaptation work outlined in Section 9 of this report. It is anticipated that coastal flood provisions will be included in a future plan change that reflects outcomes of the adaptation work.

130. As there is a low likelihood of tsunami occurring in the Tasman Bay area compared with coastal flood (storm surge), it is considered appropriate that the current focus needs to be on coastal flood and climate change adaptation work.

131. Based on the above responses I recommend rejecting the submission request of [Toka Tū Ake EQC S203.002].

Coastal Flood mapping, inclusion in PC29

132. In relation to submission point Kirsten Brown [S561.001] requesting clarification on the Inundation Overlay, as outlined in 13.1 of the Section 32 report, some of the outdated flood cells in the coastal area have been replaced with the 2021 river flood layer. It is anticipated that coastal flood provisions including mapping will be included in a future plan change that reflects out outcomes of the climate change adaptation work. I recommend accepting the submission point Kirsten Brown [S561.001] as this report has responded to the submission request.

9.3.5 Recommendations

133. In summary, in respect to the Spatial extent of the coastal flood scenario 1% AEP event SSP 8.5 (H+) (including Vertical Land Movement-VLM), river flood and the scope of PC29, I recommend no amendments to PC29.

9.3.6 Section 32AA further evaluation

134. As no changes are recommended to PC29 as are recommended to PC29 as a result of these submission points no further evaluation is required under S32AA.

9.4 Flood Hazard - General Matters

9.4.1 Notified PC29

135. The notified PC29 included new flood provisions and river flood overlays and the partial amendment of the Operative NRMP flood overlays (refer to Section 13.2 of the Section 32 report). Coastal flood overlay(s) were not included or specific coastal flood rules as it is considered that climate change adaptation (refer to above sections in this report), particularly coastal flood work is required before these are included.

136. The notified PC29 has sought to manage development in areas affected by natural hazards rather than prohibiting development through including the latest river flood data and requiring that most development is restricted discretionary. The consideration of stormwater has been included as a discretionary matter as the management of this is part of flood hazard management.

9.4.2 Submissions

137. The main matters in contention raised by submitters are:

a) Climate change in relation to sea level rise, adaptation and flood (coastal and river);

b) The opposition to development in flood prone areas; and

c) The use of sponge city (water sensitive design) strategies in the urban environment and the management of stormwater.

Climate change – sea level rise and adaptation (coastal and river flood)

138. Numerous submissions considered sea level rise, adaptation, and development. David Bennett [S387.012] states, "address the climate change effects and come up with a plan or proposal to address projected sea-level rise (detailing plans for retreat and the maintenance of infrastructure". David Ayre [S606.009] requests taking "account of likely sea level rise and river flooding during the expected lifetime of new buildings (in the city centre) as a result of climate change." Resilienz Ltd, Lindsay Wood [S625.006], suggests undertaking Dynamic Adaptive Pathway Planning (DAPP) prior to finalising PC29. Similarly, the Tāhunanui Community Hub [S889.008] request delaying PC29 and combining decision making on plan changes 29 and 30 with the consideration of sea level rise and coastal inundation after government policy on climate change is released. Katherine Mann and Michael Levy [S600.002] suggest this (climate change) may be the most significant issue confronting our short-medium term future. They suggest that Council should address climate change and the areas at risk in the city now and not wait for government. John Fitchett [S732.042] states that if the risk of inundation is as great as suggested, then the proposal should deal constructively with it, and not allow the existing scenario to continue.

139. Further submissions were received in relation to the matter raised in Katherine Mann and Michael Levy's submission point [S600.002]. The Tāhunanui Community Hub [FS60.055] and Jude Osborne [FS72.063] state they support Katherine Mann and Michael Levy's submission point [S600.002]. They state that climate change needs action now, that PC29 should be rejected in its entirety and that a city-wide response is required, noting that The Wood and Tāhunanui have been 'left off'.

Oppose development in coastal flood prone areas

140. Two submissions, SPArchitect Ltd, [S603.025] and Stephanie Phillip [S597.024] oppose the proposal to maintain the existing residential rules in areas that are flood prone and at risk from future coastal inundation (flood). The submission point [S597.024] suggests raising existing dwellings similar to a Fiji Bure.

Sponge cities/water sensitive design (WSD) /stormwater management

141. Numerous submissions raised the application of water sensitive design (commonly known as 'sponge cities') in relation to the management of stormwater. Damian Velluppillai in his evidence defines stormwater (paragraph 9c) and (paragraph 29) provides an outline of the 'sponge cities' approach. Additionally, the evidence of Alec Louverdis outlines the detention of stormwater.

142. Submissions raise the following issues:

a) Encouraging 'sponge' planting to absorb heavy rainfall in relation to residential dwellings, Stephen Bayley [S369.003];

b) Incorporate the concept of 'sponge cities' for all new developments, Kathryn McDonald [S757.003]. Similarly, Barbara Greene [S113.011] states that 'sponge city' principles will be necessary as climate change is likely to bring ongoing extreme weather events;

c) Natural ground surfaces being left to absorb water. Judith Dix [S744.012] and Sarah-Jane Weir [S36.016] request ensuring the ability of the city to 'sink' up rain through the provision of sufficient non-built space; and

d) The implementation of a flood risk wetland proposal in flood prone residential sites requiring discretionary resource consents to raise existing house floor levels above flood levels with pile foundations to a maximum building height of 10m if the site has 100% permeable surfaces at ground level. The submissions suggest that the daylight admission rules should not apply to houses raised to avoid flood levels Stephanie Phillips, [S597.025] and SPArchitect Ltd, [S603.026].

9.4.3 Evaluation

Climate change – sea level rise, adaptation (coastal and river flood)

143. Section 9 of this report provides comment on Council's coastal flood adaptation work. Given this, I recommend rejecting the following submission points: David Bennett [S387.012], David Ayre [S606.009], Katherine Mann and Michael Levy [S600.002] and John Fitchett [S732.042]. I also recommend rejecting the further submission Tāhunanui Community Hub [FS60.055] and Jude Osborne [FS72.063].

144. Toby Kay in his evidence (paragraph 9.4) in relation to the Resilienz Ltd submission point [625.006] states "I agree with the submitter that climate change adaptation would be useful to inform landuse planning for susceptible areas of the city, however, in my view, PC29 can appropriately proceed in advance of climate change adaptation planning, as the residential areas which are at highest risk of future flood are not being considered for re-zoning to support higher density development. I anticipate that if the outcome of adaptation planning is that high density developments are appropriate in these areas, including parts of The Wood, then this can

potentially be achieved through future plan changes to the NRMP". I recommend rejecting the Resilienz Ltd submission point [625.006].

Oppose development in coastal flood prone areas

145. Refer to the comments in Section 9 of this report regarding Council's coastal flood adaptation work and not including areas projected to be affected by 1% AEP event SSP 8.5 (H+) (including VLM).

146. Toby Kay in his evidence 8.3 responds to Stephanie Phillip stating that it is currently possible for dwellings to be raised. He states that he does not consider this approach suitable for subdivisions though.

147. The natural hazards approach of PC29 supports the consideration of development in areas subject to coastal flood through provisions and the limiting the extent of intensification in PC29. I recommend rejecting the submission point from Stephanie Phillips, [S597.024] and SPArchitect Ltd, [S603.025].

Sponge cities/water sensitive design (WSD)/stormwater

148. Damian Velluppillai in his evidence suggests that the concept of water sensitive design (sponge cities) currently exists and there are some provisions included in the Nelson-Tasman Land Development Manual (paragraph 34). Based on this evidence I recommend the rejection of the following submission points Stephen Bayley [S369.003], Barbara Greene [S113.011], Judith Dix [S744.012], Sarah-Jane Weir [S36.016], Kathryn McDonald [S757.003], Stephanie Phillips [S597.025] and SPArchitect Ltd, [S603.026].

9.4.4 Recommendations

149. In summary, in respect to the Flood Hazard – General Matters, I recommend no amendments to PC29.

9.4.5 Section 32AA further evaluation

150. As no changes are recommended to PC29 as are recommended to PC29 as a result of these submission points no further evaluation is required under S32AA.

9.5 Appropriateness of the Flood Hazard Policies

9.5.1 Notified PC29

151. PC29 includes an objective and policies for flood hazard. The focus is on the inclusion of new spatial data, the retention of Operative NRMP data where appropriate and most activities being Restricted Discretionary (refer to Part 2 of the Section 32 report for an explanation of the PC29 approach). The following flood related polices were included in the notified PC29:

a) DO2.2.2 flood hazard: identifying the Annual Exceedance Probability Event;

b) DO2.2.3 flood hazard: consideration of the historical observed inundation mapping;

c) DO2.2.4 flood hazard: subdivision, use and development in flood areas;

d) DO2.2.5 flood hazard: buildings and activities;

e) DO2.2.6 flood hazard: hard protection structures;

f) DO2.2.7 flood hazard: activities and development;

g) DO2.2.8 flood hazard: redevelopment;

h) DO2.2.9 flood hazard: adverse effects; and

i) DO2.2.10 flood hazard: high flood hazard, floodways and floodpaths: subdivision, use and development.

9.5.2 Submissions

152. An overall comment on the flood hazard objective and policies was made by Te Whatu Ora [S709.24]. It is requested that consideration is given to "amendments to the flood hazard objectives and policies to introduce stricter provisions that avoid new subdivisions, development and activities within flood areas".

DO2.2.2 flood hazard: identifying the Annual Exceedance Probability Event

153. Toka Tū Ake EQC [S203.003] support retaining policy DO2.2.2 flood hazard: identifying the Annual Exceedance Probability Event. Zero Carbon Nelson Tasman [S324.011] requests that in relation to the Methods (DO2.2.2.ii) that frequency of a 1% AEP event is considered.

DO2.2.3 flood hazard: consideration of the historical observed inundation mapping

154. Toka Tū Ake EQC [S203.004] did not request any change in relation to policy DO2.2.3 flood hazard: consideration of the historical observed inundation mapping. Kāinga Ora [S933.018] has requested that the policy is deleted.

DO2.2.4 flood hazard: subdivision, use and development in flood areas

155. In relation to policy DO2.2.4 flood hazard: subdivision, use and development in flood areas, Connexa Limited (Connexa) [S487.005], Chorus New Zealand Limited (Chorus) [S486.005], Aotearoa Tower Group Limited (trading as FortySouth) [S488.005], One New Zealand Limited (One NZ) [S490.005] and Spark New Zealand Trading Limited (Spark) [S491.005] requested the following amendment DO2.2.4(3) "unless, for infrastructure, there is a functional or operational need for the infrastructure to be located in the flood hazard area." Transpower New Zealand Limited [S198.017] has requested a similar amendment to DO2.2.4 as follows: DO2.2.4 (2). the building, land use or activity being proposed is suitable and its vulnerability to risk from the flood hazard is not increased, "recognising the functional and/or operational need for some activities to locate within the Flood Areas;"

156. BP Oil NZ Ltd, Mobil Oil NZ Ltd, and Z Energy Ltd [S257.001] request the following amendment in relation to DO2.2.4 (6) building platforms "for buildings accommodating residential activities are" not located within land identified in the High Flood Hazard, Floodways, or Flood Paths.

157. Kāinga Ora [S933.019] also requested amendment to policy DO2.2.4(6), the proposed amendment is: building platforms are not located within land identified in the High Flood Hazard, *or* <u>where located within the</u> Floodways, or Flood Paths <u>are provided with appropriate mitigation to not</u> *exacerbate flood effects.*

158. Transpower New Zealand Limited [S198.017] has requested in relation to policy DO2.2.4 flood hazard: subdivision, use and development in flood areas that the words Flood Area in the policy name are in uppercase. In the same submission point they have also requested the following amendment: 2. the building, land use or activity being proposed is suitable and its vulnerability to risk from the flood hazard is not increased, recognising the functional and/or operational need for some activities to locate within the Flood Areas;

159. The Toka Tū Ake EQC [S203.005] submission requests that policy DO2.2.4 flood hazard: subdivision, use and development in flood areas is amended to include a definition of the level of flood risk deemed 'significant' by the Council or alternatively, remove references to 'significant' risk.

160. Te Whatu Ora [S709.014] request that DO2.2.4.(i) is amended to the following and that consideration is given to including wording about risks to public health and wellbeing and avoiding new subdivision or development within flood areas. The following amendment is requested in relation to the Explanation and Reasons for DO2.2.4.

161. The Flood areas indicate the location of areas where flooding may occur. Flooding can cause harm to people and significant damage to buildings, ~~and~~ infrastructure and the natural environment. In the first instance, it is important that subdivision and development in flood areas is avoided. If the development is to go ahead, it is important that prior to development consideration is given to the flood hazard and measures are taken to reduce any risk.

162. Manuka Street Hospital Limited [S881.006] requests in relation to policy DO2.2.4 flood hazard: subdivision, use and development in flood areas that a more detailed analysis to identify areas prone to flooding. The submission states the flood provisions related to the site will have a significant impact on the opportunity for the hospital to develop. Refer to Accuracy of the river flood modelling and deletion of the High Flood and Flood Hazard overlays in this report for a discussion on this matter.

163. Zero Carbon Nelson Tasman [S324.008] has requested an amendment of DO2.2.4(9) DO2.2.4 flood hazard: subdivision, use and development in flood areas. They state that: *The storage and use of hazardous substances in any zone in exposed to natural hazards such as flooding, land slip or liquefaction should not be permitted.*

164. There was one further submission in relation to matters raised by Te Whatu Ora. Toka Tū Ake EQC [FS73.050] in relation to policy DO2.2.4 flood hazard: subdivision, use and development in flood areas stated that they support stricter provisions that avoid new subdivisions and to align the provision with the proposed NPS-NHDM.

DO2.2.5 flood hazard: buildings and activities

165. Toka Tū Ake EQC [S203.006] requests that a definition of the level of flood risk deemed 'significant' by Council is included or that references to 'significant' are removed.

166. Te Whatu Ora [S79.025] has requested that 'vulnerable people' is defined in MW.iii Meaning of Words. 'Vulnerable people' is used in DO2.2.5.iv Methods rather than the policy.

167. Zero Carbon Nelson Tasman [S324.012] request that the policy is amended, the submission states This policy follows reason #7, and we recommend it is deleted or amended to follow reason #6. We shouldn't be putting more people in harm's way. Zero Carbon Nelson Tasman [S324.013] also

request an amendment to DO2.2.5.iv Methods that buildings to be used by vulnerable people should be prohibited from being built in flood hazard overlays.

DO2.2.6 flood hazard: hard protection structures

168. In relation to policy DO2.2.6 flood hazard: hard protection structures, Nelson Airport [S478.006] requests that the following is included in the policy:

a) there is no practical natural defence option

b) nationally and/or regionally significant infrastructure would otherwise be subject to significant adverse effects from natural hazards.

169. Zero Carbon Nelson Tasman [S324.014] request that DO2.2.6(3) and DO2.2.6(4) are amended to include a time frame and the consideration of the cost of the final removal.

170. Te Whatu Ora [S709.026] stated that they support policy DO2.2.6 flood hazard: hard protection structures.

DO2.2.7 flood hazard: activities and development

171. Zero Carbon Nelson Tasman [S324.015] request that activities and development should include the responsibility of minimising waste to landfill after flooding and that this should be included in policy DO2.2.7 flood hazard: activities and development.

172. Nelson Airport (S478.007) requests that the policy DO2.2.7 flood hazard: activities and development is amended to include the following: *or (ii)* the activity is to support nationally and/or regionally significant infrastructure while mitigating significant risks of adverse effects from flood hazards to people, property, infrastructure, and the natural environment.

173. Further submissions to the submission from Nelson Airport were received and are included in Appendix 1.

174. Te Whatu Ora [S709.027] request the following:

a) the consideration of amending DO2.2.7 flood hazard: activities and development to introduce stricter provisions to avoid new activities and development within flood hazard, flood and inundation overlays;

b) recommend re 'significant risk' that the wording is aligned with the proposed NPS-NHDM. If 'significant risk' is retained, define it under MWiii;

c) recommend define what 'risk to people' means in MWiii.

175. Transpower New Zealand Limited [S198.018] requests the policy is amended to include recognising the functional and/or operational need for some activities to locate within the Flood hazard, Flood and Inundation overlays.

176. There was one further submission on this matter, Toka Tū Ake EQC [FS73.051]. It is stated that they support stricter provisions.

DO2.2.8 flood hazard: redevelopment

177. Zero Carbon Nelson Tasman [S324.016] state they oppose Policy DO2.2.8 Flood hazard: redevelopment. Additionally, Zero Carbon Nelson Tasman [S324.017] request the amendment of

DO2.2.8(i) flood hazard: redevelopment so that the reason states that any redevelopment needs to comply with the Emission Reduction Plan. It is noted that DO2.2.8(i) is an Explanation and Reasons. They also request [S324.018] the amendment of DO2.2.8(ii) Methods to state that any redevelopment must comply with the Emission Reduction Plan

178. Te Whatu Ora [S709.028] requests the amendment of DO2.2.8(i) Explanation and Reasons to delete 'development'.

DO2.2.9 flood hazard: adverse effects

179. Zero Carbon Nelson Tasman [S324.019] state that they oppose the policy DO2.2.9 flood hazard: adverse effects.

180. Transpower New Zealand Limited [S198.019] requests that the following text is included in policy DO2.2.9 flood hazard: adverse effects **recognising the functional and/or operational need for some activities to locate within the Flood hazard, Flood and Inundation overlays.**

181. Toka Tū Ake EQC [S203.007] request amendments to the policy;

a) Include a definition of the level of flood risk deemed "significant" by the Council. Alternatively, remove references to 'significant' risk.

b) Include "avoid" in relation to High Flood Hazard, Floodways and Flood Paths include subdivision, use, and development for vulnerable activities.

DO2.2.10 flood hazard: high flood hazard, floodways and floodpaths: subdivision, use and development

182. The Nelson Airport [S478.008] request the amendment of DO2.2.10(i) flood hazard: high flood hazard, floodways and floodpaths: subdivision, use and development Explanations and Reasons to include **or except for nationally and/or regionally significant infrastructure that can demonstrate a functional or operational need for those activities to occur in these areas**

183. Toka Tū Ake EQC [S203.008] request the following amendment to the policy:

a) Include a definition of the level of flood risk deemed 'significant' by the Council. Alternatively, remove references to 'significant' risk.

b) Include a definition of the level of flood risk mitigation deemed 'adequate' by the Council. Alternatively, remove references to 'adequate' risk mitigation.

184. Te Whatu Ora requests [S709.029] supports the policy and DO2.2.10(i) Explanation and Reasons. The submission recommends that in regard to 'significant risk' it is aligned to wording around risk in the proposed NPS-NHD. If 'significant risk' is retained, define it under MWiii. Additionally, it is requested that 'risk to people' is defined in MWiii.

185. Transpower New Zealand Limited [S198.020] request the following be included in the policy and recognising the functional and/or operational need for some activities to locate within the High Flood Hazard, Floodways and Flood Paths overlays.

186. Zero Carbon Nelson Tasman [S324.020] state that they oppose the policy DO2.2.10 flood hazard: high flood hazard, floodways and floodpaths: subdivision, use and development.

187. Toka Tū Ake EQC [FS73.052] state they support in part the [S709.029] submission request. They ask for the removal of the phrase 'where possible' to make the provision stronger.

9.5.3 Evaluation

Overall comment on flood hazard objective and policies

188. In relation to the Te Whatu Ora [S709.024] submission regarding the use of "avoid", refer to the PC29 approach outlined in this report and the Section 32 report. It is suggested that Policy D02.2.4(3) flood hazard: subdivision, use and development in flood areas including significant risk to people, property, infrastructure and the natural environment, including social and cultural effects, from the flood hazard is avoided, addresses the submission point. I recommend rejecting the Te Whatu Ora submission [S709.24].

DO2.2.2 flood hazard: identifying the Annual Exceedance Probability Event

189. In relation to the Toka Tū Ake EQC [S203.003] submission request I recommend accepting this submission point. I reject the submission request of Zero Carbon Nelson Tasman [S324.011] as I suggest that a planning instrument is not an appropriate document to locate this information.

DO2.2.3 flood hazard: consideration of the historical observed inundation mapping

190. Regarding policy DO DO2.2.3 flood hazard: consideration of the historical observed inundation mapping, Kāinga Ora [S933.018] has requested that the policy is deleted. Refer to Section 9 of this report in relation to the retention of the flood hazard overlays. In relation to the retention of the historical observed inundation mapping, it is necessary to retain these until all the Council local government area mapping has been included in the NRMP. I recommend the acceptance of the Toka Tū Ake EQC [S203.004] submission point and the rejection of the Kāinga Ora [S933.018] submission point.

DO2.2.4 flood hazard: subdivision, use and development in flood areas

191. I recommend rejecting the following submission points Connexa Limited (Connexa) [S487.005], Chorus New Zealand Limited (Chorus) [S486.005], Aotearoa Tower Group Limited (trading as FortySouth) (S488.005, One New Zealand Limited (One NZ) [S490.005], Spark New Zealand Trading Limited (Spark) [S491.005] and Transpower New Zealand Limited [S198.017] on the basis that the Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2016 (NESTF) exempts the regulated activities from having to comply with natural hazard related rules in a District Plan.

192. I recommend rejecting the submission point from BP Oil NZ Ltd, Mobil Oil NZ Ltd, and Z Energy Ltd [S257.001] regarding building platforms for residential activities being distinguished from non-residential activities in policy DO2.2.4(6). However, I am not averse to considering this submission request following the provision of further information. In relation to the Kāinga Ora [S933.019] I suggest that ideally no building platform particularly those associated with residential uses should be located in a watercourse (Floodway or Flood Path). On this basis, I recommend rejecting the submission point Kāinga Ora [S933.019]

193. I recommend **accepting** the submission point from Transpower New Zealand Limited [S198.017] that the words **Flood Area** in the policy (DO2.2.4 flood hazard: subdivision, use and development in flood areas) name should be uppercase.

194. I recommend rejecting the Toka Tū Ake EQC [S203.005] submission request that policy DO2.2.4 flood hazard: subdivision, use and development in flood areas is amended to include a definition of the level of flood risk deemed 'significant' by the Council or alternatively, remove references to 'significant' risk. This matter has been discussed with Toka Tū Ake EQC.

195. I recommend accepting in part the Te Whatu Ora [S709.014] request to amend the Explanation and Reasons to include natural environment. I recommend rejecting the Te Whatu Ora [S709.014] request (taking into considering comment from Toka Tū Ake EQC in their further submission) to include stricter provisions in relation to subdivision and natural hazards. I consider the notified PC29 rules provide sufficient controls.

196. I recommend the rejection of the Manuka Street Hospital Limited [S881.006] submission request on the basis that the notified PC29 High Flood Hazard and Flood Hazard model has been peer reviewed and that it is part of the natural hazard approach to include flood mapping. Additionally, the flood mapping applying to the Manuka Street Hospital Limited site has been reviewed and no amendments are to be included in the notified PC29 flood overlays. Refer to Section 9. Accuracy of the river flood modelling and deletion of the High Flood and Flood Hazard overlays in this report.

197. I recommend rejecting the Zero Carbon Nelson Tasman [S324.008] submission request in relation to the storage and use of hazardous substances as I consider the rules (REr.83A, ICr.59A, SCr.55A and IN60A Flood Areas except Flood Paths or Floodways – Storage of a hazardous substance, relating to the storage and use of hazardous substances adequately manage the matter.

DO2.2.5 flood hazard: buildings and a*ctivities*

198. In relation to the Toka Tū Ake EQC [S203.006] submission concerning policy DO2.2.5 flood hazard: buildings and activities, this matter was discussed with Toka Tū Ake EQC. I recommend accepting the submission request of Toka Tū Ake EQC [S203.006] to remove "significant" from the policy.

199. In regard to the Zero Carbon Nelson Tasman [S324.012] submission concerning reason number 6 and 7, I recommend rejecting this submission request as it is unclear what is being sort. I would be pleased to reconsider this matter if further information is received.

200. I recommend rejecting the submission request from Zero Carbon Nelson Tasman [S324.013] as I consider it discriminatory. REr.83B.3(ix) Flood Areas except Flood Paths or Floodways – Building and below ground swimming pools has as a matter of discretion *access in a flood event, including ingress and egress.*

DO2.2.6 flood hazard: hard protection structures

201. In relation to policy DO2.2.6 flood hazard: hard protection structures and the request relating infrastructure, Nelson Airport has been recommended in another report (Section 42A City Centre, Commercial and Infrastructure report) to be included in the definition of regionally significant infrastructure and while I support that, I do not consider the above amendment to DO2.2.6 appropriate as the Nelson Airport needs to ensure its resilience and this may include restrictions or mitigations. I recommend rejecting an amendment to DO2.2.6 to include the request of for Nelson Airport Limited [S478.006] to be provided with exemptions or exclusions related to being either national or regionally significant. In relation to the request to include "practical", I also reject the submission request Nelson Airport Ltd [S478.006]. I consider that in determining if there

is no natural defence option, the practical aspects would have been considered. Given, this the addition of "practical" is unnecessary.

202. I recommend rejecting the Zero Carbon Nelson Tasman request [S324.014] that DO2.2.6 (3) and DO2.2.6 (4) are amended to include a time frame and the consideration of the cost of the final removal as it is a matter that would likely be addressed in a consent application.

203. I recommend accepting the submission request from Te Whatu Ora [S709.026] who state that they support policy DO2.2.6 flood hazard: hard protection structures.

DO2.2.7 flood hazard: activities and development

204. I recommend rejecting the request by Zero Carbon Nelson Tasman [S324.015] to amend policy DO2.2.7 flood hazard: activities and development in relation to the minimising waste to landfills following a flood, as this strategy is best included in waste management policies including the civil defence policy on this.

205. In relation to DO2.2.7 flood hazard: activities and development and infrastructure, Nelson Airport has been recommended in another report (Section 42A City Centre, Commercial and Infrastructure report) to be included in the definition of regionally significant infrastructure and while I support that, I do not consider the above amendment to Policy DO2.2.7 appropriate as the Nelson Airport needs to ensure its resilience and this may include restrictions or mitigations. I recommend rejecting an amendment to Policy DO2.2.7 to include the request by Nelson Airport Limited [S478.007] to be provided with exemptions or exclusions related to being either national or regionally significant.

206. Further submissions to the submission from Nelson Airport were received and recommendations on those further submissions are included in Appendix 1.

207. I recommend in relation to the Te Whatu Ora [S709.027] submission concerning policy DO2.2.7 flood hazard: activities and development the following:

a) rejecting the request to introduce stricter provisions to avoid new activities and development within flood hazard, flood and inundation overlays. I note the Toka Tū Ake EQC further submission [FS73.051] supports stricter provisions. The notified PC29 approach is outlined in Part 2 of the Section 32 report. Until climate change adaptation is undertaken is considered that the PC29 approach is appropriate.

b) rejecting in relation to 'significant risk' that the wording is aligned with the proposed NPS-NHDM. If 'significant risk' is retained, define it under MWiii. The proposed NPS-NHDM has not been finalised, given this it is consider premature to align PC29 with it.

c) rejecting defining what 'risk to people' means in MWiii. I suggest that generally it is understood and that there are many risk assessment tools to consider this. A definition may limit consideration of risk.

208. In relation to DO2.2.7 flood hazard: activities and development I recommend rejecting the submission request from Transpower New Zealand Limited [S198.018] to include "recognising the functional and/or operational need for some activities to locate within the Flood hazard, Flood and Inundation overlays.". I consider that the policy provides the opportunity for proposed infrastructure to be located in flood hazard areas with the appropriate controls.

DO2.2.8 flood hazard: redevelopment

209. I recommend rejecting the request from Zero Carbon Nelson Tasman [S324.017] and [S324.018] to include the request the Emission Reduction Plan inDO2.2.8(i) and DO2.2.8.ii Methods. The Emissions Reduction Plan is a national document which contains policy actions and differs in its intent to a local government planning instrument policy aimed at managing development in areas shown in a flood hazard overlay. The Section 32 report considers the National Emissions Reduction Plan (Te hamārohi ki anamata Towards a productive, sustainable and inclusive economy; Aotearoa New Zealand's First Emissions Reduction Plan) as required under (Section 74(2)(d)) and 74(2)(e)) of the RMA. The PC29 approach includes the reduction of emissions.

210. I recommend rejecting the Zero Carbon Nelson Tasman [S324.016] request relating to Policy DO2.2.8 Flood hazard: redevelopment. I consider the notified PC29 natural hazards approach in relation to redevelopment with appropriate flood management measures is appropriate when seeking residential intensification.

211. I recommend accepting the Te Whatu Ora [S709.028] submission regarding the amendment of DO2.2.8(i) Explanation and Reasons to delete 'development'.

DO2.2.9 flood hazard: adverse effects

212. I recommend rejecting the Zero Carbon Nelson Tasman [S324.019] request in regard to opposing policy DO2.2.9 flood hazard: adverse effects. In most instances flood hazard provisions and associated development guidance documents such as the IPN can manage the adverse effects of flood.

213. In relation to policy DO2.2.9 flood hazard: adverse effects, I recommend rejecting the submission request from Transpower New Zealand Limited [S198.019] to include "recognising the functional and/or operational need for some activities to locate within the Flood hazard, Flood and Inundation overlays.". I consider that the policy provides the opportunity for proposed infrastructure to be located in flood hazard areas with the appropriate controls.

214. In relation to the Toka Tū Ake EQC [S203.007] request I recommend the following:

a) **Accepting** the submission point to remove the reference to 'significant' in DO2.2.9; and

b) **Rejecting** including "avoid" in relation to the High Flood Hazard, Floodways and Flood Paths avoid subdivision, use, and development for vulnerable activities. I consider that notified PC29 provisions are more appropriate.

DO2.2.10 flood hazard: high flood hazard, floodways and floodpaths: subdivision, use and development

215. Nelson Airport has been recommended in another report (Section 42A City Centre, Commercial and Infrastructure) to be included in the definition of regionally significant infrastructure and while I support that, I do not consider the above amendment to Policy DO2.2.10(i) flood hazard: high flood hazard, floodways and floodpaths: subdivision, use and development appropriate as the Nelson Airport needs to ensure its resilience and this may include restrictions or mitigations. I recommend rejecting an amendment to Policy DO2.2.10(i) to include the request of Nelson Airport Limited [S478.008] to be provided with exemptions or exclusions related to being either national or regionally significant.

216. In relation to the Toka Tū Ake EQC [S203.008] submission request I recommend the following:

a) **Reject** the removal of 'significant' in DO2.2.10

b) **Reject** the request to Include a definition of the level of flood risk mitigation deemed 'adequate' by the Council. Alternatively, remove references to 'adequate' risk mitigation.

217. Te Whatu Ora [S709.029] supports the inclusion of the policy and DO2.2.10(i) Explanation and Reasons. The submission recommends that in regard to 'significant risk' it is aligned to wording around risk in the proposed NPS-NHDM. If 'significant risk' is retained, define it under MWiii. Additionally, it is requested that 'risk to people' is defined in MWiii. Toka Tū Ake EQC [FS73.052] state that they support the submission in part. They request the removal of the phrase "where possible". I recommend rejecting the Te Whatu Ora [S709.029] submission request is relation to aligning it with the proposed NPS-NHDM as this is a proposed policy (as outlined in other sections of this report). I also recommend rejecting the request to define 'significant'. I recommend rejecting the Toka Tū Ake EQC [FS73.052] as there may be some circumstances where it is not possible to avoid some locations.

218. I recommend rejecting the submission request in relation to DO2.2.10 flood hazard: high flood hazard, floodways and floodpaths: subdivision, use and development, from Transpower New Zealand Limited [S198.20] to include recognising the functional and/or operational need for some activities to locate within the Flood hazard, Flood and Inundation overlays.

219. I recommend rejecting the Zero Carbon Nelson Tasman [S324.020] request stating that they oppose the policy. Their submission states that the rationale for the position is that more development will exacerbate flood problems. The policy is required to support rules relating to development in high flood hazard, floodways and floodpaths.

220. In relation to Transpower New Zealand Limited [S198.020] I recommend **rejecting** the submissions request concerning including in the policy **and recognising the functional and/or operational need for some activities to locate within the High Flood Hazard, Floodways and Flood Paths overlays.**

9.5.4 Minor corrections

221. Whilst not a submission, it is noted that in DO2.2.5.iv there should be 'and' between 'people' and 'provide'. I recommend that this amended as a minor correction using Schedule 1 s16 (minor corrections).

9.5.5 Recommendations

222. In summary, in respect to the Appropriateness of the Flood Hazard Policies, I recommend the following amendments:

Provision(s)	Officer recommendations
Policy DO2.2.4 flood hazard: subdivision, use and development in flood areas	Amend the Explanation and Reasons to include *natural environment.*
DO2.2.4 flood hazard: subdivision, use and development in flood areas	The text **Flood Area** in the policy (DO2.2.4 flood hazard: subdivision, use and development in flood areas) is to be in uppercase

Provision(s)	Officer recommendations
DO2.2.8 flood hazard: redevelopment	Amend DO2.2.8(i) Explanation and Reasons to delete 'development'.
DO2.2.5 flood hazard: buildings and activities	Remove the reference to 'significant' in DO2.2.5
DO2.2.9 flood hazard: adverse effects	Remove the reference to 'significant' in DO2.2.9.

9.5.6 Section 32AA further evaluation

223. I have recommended some minor changes to the flood polices as a result of these submissions, consequently a further evaluation is required under s32AA. The proposed amendments are minor and will assist to make clearer the policy intent of these provisions.

224. The amendments proposed are more consistent with the wording of Objective DO2.2 and are therefore more appropriate than the notified policies. The changes clarify the use of 'significant risk' in conjunction with the more restrictive planning response to 'avoid' and are therefore more appropriate than the notified version.

9.6 Appropriateness of the Flood Hazard Rules, including definitions

9.6.1 Notified PC29 Rules

225. PC29 introduces flood hazard rules which increase the level of assessment (restricted discretionary generally with limited Permitted Activities) with supporting policies and overlays. Rules regarding Floodways and Floodpaths (watercourses) have been separated from the terrestrial related flood hazard rules. The rules cover the following themes across the Residential, Inner City, Suburban Commercial and Industrial zones:

a) Flood Path, Floodway;

b) Flood Areas except Flood Paths or Floodways - Storage of hazardous substances;

c) Flood Areas except Flood Paths or Floodways - Building and below ground swimming pools;

d) Flood Areas except Flood Paths or Floodways - Fence, wall, retaining wall, outside storage;

e) Flood Areas except Flood Paths or Floodways - Network utility;

f) Flood Areas except Flood Paths or Floodways – Earthworks;

g) Flood Areas except Flood Paths or Floodways - Flood mitigation and protection works; and

h) Flood Areas – Subdivision.

9.6.2 Submissions

Flood Path, Floodway

226. Flood paths and floodways are watercourses. The rule allows as a permitted activity minor infrastructure works in watercourses however, activities and buildings that contravene a permitted condition are discretionary. This recognises that development in watercourses may cause unwanted externalities. The relevant rules are REr.82, ICr.58, SCr.54 and INr.59.5 Flood Path, Floodway.

227. Connexa Limited (Connexa) [S487.013], Chorus New Zealand Limited (Chorus) [S486.013], Aotearoa Tower Group Limited (trading as FortySouth) [S488.013], One New Zealand Limited (One NZ) [S490.013] and Spark New Zealand Trading Limited (Spark) [S491.013] request that REr.82.1 Flood Path, Floodway is amended to make telecommunication network utilities (whether underground or above ground, new infrastructure or upgrades to existing infrastructure) and associated earthworks permitted activities within a Flood Path, Flood Overlay, Floodway, or Flood Areas.

228. Transpower New Zealand Limited [S198.046] request retaining REr.82 Flood Path, Floodway as notified.

229. Kāinga Ora [S933.030] requests the amendment of flood hazard rules REr.82 Flood Path, Floodway and rules and REr.83A-F to align with the request to remove flood overlays from PC29 [S933.003] and any consequential amendments made as a result of this [S933.005].

230. Connexa Limited (Connexa) [S487.013], Chorus New Zealand Limited (Chorus) [S486.01], Aotearoa Tower Group Limited (trading as FortySouth) [S488.013], One New Zealand Limited (One NZ)

[S490.013] and Spark New Zealand Trading Limited (Spark) [S491.013] request that ICr.58.1 Flood Path, Floodways is amended to make telecommunication network utilities (whether underground or above ground, new infrastructure or upgrades to existing infrastructure) and associated earthworks permitted activities within a Flood Path, Flood Overlay, Floodway, or Flood Areas.

231. Nelson City Council [S947.008] requests the deletion of the word "except" from ICr.58(c) Flood Path, Floodway. This submission request refers to ICr.58.1(c).

232. The only submission on SCr.54 Floodway was from Toka Tū Ake EQC [S203.092] who state that they do not request a change to the notified rule SCr.54 Floodway.

233. Te Whatu Ora [S709.135] provided the only submission on INr.59.5 Flood Path, Floodway Explanation requesting the following amendment:

"All buildings and any above ground structures, and any earthworks (other than temporary earthworks for laying underground utilities) in any Flood Path or Floodway have been made discretionary activities so the degree of risk to **people**, life and property can be evaluated in each case."

234. EQC Toka Tū Ake [FS73.060] supports the suggested amendment from Te Whatu Ora [S709.135] to include 'people'.

Flood Areas except Flood Paths or Floodways - Storage of hazardous substances

235. The notified PC29 rule controls the storage of hazardous substances in terrestrial areas shown on the flood hazard overlays. The rules for this theme are: REr.83A, ICr.59A, SCR.55A and INr.60A Flood Areas except Flood Paths or Floodways – Storage of hazardous substances.

236. Kāinga Ora [S933.030] request the amendment of REr.83A Flood Areas except Flood Paths or Floodways – Storage of hazardous substances on the basis of requesting that the flood overlays be outside of PC29 [S933.003 to S933.005].

237. Toka Tū Ake EQC [S203.068] and [S203.096] request that REr.83A and SCr.55A Flood Areas except Flood Paths or Floodways – Storage of hazardous substances is amended to require that the storage and use of hazardous materials be a restricted discretionary activity in all Flood Areas. This would include Flood Paths and Floodways.

238. BP Oil NZ Ltd, Mobil Oil NZ Ltd, and Z Energy Ltd [S257.012], [S257.018] and [S257.020] request the amendment of the rule ICr.59A.1, SCr.55A.1 and INr.60A.1 Flood Areas except Flood Paths or Floodways – Storage of hazardous substances as follows:

"In Flood Areas, except any Flood Path or Floodway, the **aboveground** storage and use of a hazardous substance is a permitted activity where it is located within the flood plain and located in a manner so as to not be inundated from 1% AEP flood flows.

239. In the alternative, an exemption could be provided by the rule to the effect that it does not apply to the underground storage and use of a hazardous substances."

240. Nelson Airport Limited [S478.015] requests that in relation to rule INr.60A Flood Areas except Flood Paths or Floodways – Storage of hazardous substances that there are specific exemptions or exclusions for national and regionally significant infrastructure to ensure Nelson Airport can practically advance future works and activities commensurate to its scale and specific functional requirements.

Flood Areas except Flood Paths or Floodways - Building and below ground swimming pools

241. The notified rule provides for limited building and swimming pool activities in areas projected to be affected by flood as part of this it limits the size of additions to existing buildings to 10m². If an activity is not permitted, it is restricted discretionary with numerous discretionary matters including the consideration of the management of stormwater. The rules for this theme are REr.83B, ICr.59B, SCr.55B and INr.60B Flood Areas except Flood Paths or Floodways – Building and below ground swimming pools.

242. In relation to rule REr.83B Flood Areas except Flood Paths or Floodways – Building and below ground swimming pools; Kāinga Ora [S933.030] request the amendment of the rule on the basis of requesting that the flood overlays are outside of PC29 [S933.003 to S933.005]. Toka Tū Ake EQC [S203.069] state that they do not request a change and Te Whatu Ora [S709.090] requests that there is consistent wording (for the natural hazards provisions) to encompass risk to public health and wellbeing. Lastly, Manuka Street Hospital Limited [S881.026] requests the amendment of rule REr.83B Flood Areas except Flood Paths or Floodways – Building and below ground swimming pools by providing specifically for non-notification and without the need to obtain affected person approvals.

243. Te Whatu Ora [S709.111] stated that they approve of the ICr.59B Flood Areas except Flood Paths and Floodways.

244. In relation to SCr.55B Flood Areas except Flood Paths or Floodways – Building and below ground swimming pools. Toka Tū Ake EQC [S203.070] stated that they do not request an amendment to the notified rule SCr.55B - Flood Areas except Floodway and Te Whatu Ora [S709.127] state they support the notified rule SCr.55B.3 Flood Areas except Floodways - Building and below ground swimming pools.

245. Nelson Airport Limited [S478.015] requests that INr.60B Flood Areas except Flood Paths or Floodways – Building and below ground swimming pools provides specific exemptions or exclusions for national and regionally significant infrastructure to ensure Nelson Airport can practically advance future works and activities commensurate to its scale and specific functional requirements. Both GP Investments Limited [S845.041] and Margaret Whiting and the Anmar Trust [883.003] request the deletion of rule.

Flood Areas except Flood Paths or Floodways - Fence, wall, retaining wall, outside storage

246. The notified rule concerns the erection of fences, walls and retaining walls as well as outside storage. Matters that are not a permitted activity are restricted discretionary. The fences and walls provisions are considered in the context of a 1% AEP flood event. The rules for this theme are REr.83C, ICr.59C and INr.60C Flood Areas except Flood Paths or Floodways – Fence, wall, retaining wall, outside storage.

247. Manuka Street Hospital Limited [S881.027] requests the deletion of REr.83C Flood Areas except Flood Paths or Floodways – Fence, wall, retaining wall, outside storage. Kāinga Ora [S933.030] also states they would like the deletion of the rule on the basis of requesting that the flood overlays be outside of PC29 [S933.003 to S933.005].

248. Nelson Airport Limited [S478.015] requests that rule 60C Flood Areas except Flood Paths or Floodways – Fence, wall, retaining wall, outside storage includes specific exemptions or exclusions for national and regionally significant infrastructure to ensure Nelson Airport can practically

advance future works and activities commensurate to its scale and specific functional requirements. GP Investments Limited [S845.042] and Margaret Whiting and the Anmar Trust [883.004] request the deletion of rule INr.60C Flood Areas except Flood Paths or Floodways – Fence, wall, retaining wall, outside storage.

Flood Areas except Flood Paths or Floodways - Network utility

249. The notified rule seeks to manage utility infrastructure in flood affected areas. The Permitted Activities allow for minor works. If an activity is not Permitted it is Restricted Discretionary. The rules for this theme are REr.83D, ICr.59D, SCr.55D and INr.60D Flood Areas except Flood Paths or Floodways – Network utility.

250. There are numerous submissions on rule REr.83D Flood Areas except Flood Paths or Floodways – Network utility. Connexa Limited (Connexa) [S487.013], Chorus New Zealand Limited (Chorus) [S486.013], Aotearoa Tower Group Limited (trading as FortySouth) [S488.013], One New Zealand Limited (One NZ) [S490.013] and Spark New Zealand Trading Limited (Spark) [S491.013] request that REr.83D.1 is amended to "make telecommunication network utilities (whether underground or above ground, new infrastructure or upgrades to existing infrastructure) and associated earthworks permitted activities within a Flood Path, Flood Overlay, Floodway, or Flood Areas." Kāinga Ora [S933.030] request the amendment of this rule REr.83D Flood Areas except Flood Paths or Floodways – Network utility as per this submission's plan wide recommendations [S933.003 to S933.005] for addressing hazard overlays and delete no-longer relevant rules. Toka Tū Ake EQC [S203.071] state that they request no change to REr.83D Flood Areas except Flood Paths or Floodways – Network utility, Te Whatu Ora [S709.091] state that they support the rule REr.83D.3 and Transpower New Zealand Limited [S198.047] requests that REr.83D Flood Areas except Flood Paths or Floodways – Network utility.is retained as notified.

251. There are numerous submissions on rule ICr.59D Flood Areas except Flood Paths or Floodways – Network utility. Connexa Limited (Connexa) [S487.013], Chorus New Zealand Limited (Chorus) [S486.013], Aotearoa Tower Group Limited (trading as FortySouth) [S488.013], One New Zealand Limited (One NZ) [S490.013] and Spark New Zealand Trading Limited (Spark) [S491.013] request that ICr.59D.1 Flood Areas except Flood Paths or Floodways – Network utility. is amended to make telecommunication network utilities (whether underground or above ground, new infrastructure or upgrades to existing infrastructure) and associated earthworks permitted activities within a Flood Path, Flood Overlay, Floodway, or Flood Areas.

252. Te Whatu Ora [S709.112] requests the following amendment in relation to ICr.59D.3 Flood Areas except Flood Paths or Floodways Network Utility (to align with SCr.55D as follows):

iii. the risk of adverse effects to other people, property, infrastructure and the natural environment including:

a.public health and safety; and

b. impacts on ecological values and values of significance to tangata whenua and public access associated with the proposed activity, including a need for flood protection works to be required to protect the utility.

253. Toka Tū Ake EQC [S203.093] state that they do not request a change to notified rule SCr.55D Flood Areas except Flood Paths or Floodways – Network utility.

254. In relation to rule INr.60D Flood Areas except Flood Paths or Floodways – Network utility Nelson Airport Limited [S478.015] requests this rule is provided with specific exemptions or exclusions for national and regionally significant infrastructure to ensure Nelson Airport can practically advance future works and activities commensurate to its scale and specific functional requirements.

Flood Areas except Flood Paths or Floodways – Earthworks

255. The notified rule concerns earthworks in areas shown on the flood hazard overlays. The permitted activity limits the volume of fill on each occasion and in the calendar year. If the activity does not comply with the permitted activity then it is restricted discretionary.

256. There are numerous submissions on rule REr.83E and ICr.59E.1 Flood Areas except Flood Paths or Floodways – Earthworks. Connexa Limited (Connexa) [S487.013], Chorus New Zealand Limited (Chorus) [S486.013], Aotearoa Tower Group Limited (trading as FortySouth) [S488.013], One New Zealand Limited (One NZ) [S490.013] and Spark New Zealand Trading Limited (Spark) [S491.013] requests that REr.83.1 is amended to "make telecommunication network utilities (whether underground or above ground, new infrastructure or upgrades to existing infrastructure) and associated earthworks permitted activities within a Flood Path, Flood Overlay, Floodway, or Flood Areas." Kāinga Ora [S933.030] request the amendment of REr.83E Flood Areas except Flood Paths or Floodways – Earthworks based on requesting that the flood overlays be outside of PC29 [S933.003 to S933.005]. Manuka Street Hospital Limited [S881.027] requests that rule REr.83E Flood Areas except Flood Paths or Floodways – Earthworks is deleted. Transpower New Zealand Limited [S198.048] request the rule (REr.83E) is retained as notified and Toka Tū Ake EQC [S203.072] state that they do not request a change to the notified rule REr.83E

257. BP Oil NZ Ltd, Mobil Oil NZ Ltd, and Z Energy Ltd [S257.013]. [S257.019] and [S257.021] request the following amendment to rules REr.83E.1, SCr.55E.1 and ICr.59E.1 and Flood Areas except Flood Paths or Floodways – Earthworks.

"In Flood Areas, except any Flood Path or Floodway, earthworks are a permitted activity provided that the earthwork<u>s</u>:

a. is not more than:

<u>i</u> 3m3 in each calendar year of cleanfill material per site; and

<u>ii.</u> a maximum cumulative volume of filling and excavation of 25m3 per site, within any continuous period of 10 calendar years; <u>or</u>

b. <u>is undertaken in accordance with standards in the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011."</u>

258. Toka Tū Ake EQC [S203.094] state that they do not request a change to rule SCr.55E - Flood Areas except Floodways.

259. Nelson Airport Limited [S478.015] requests that rule 60E is provided with specific exemptions or exclusions for national and regionally significant infrastructure to ensure Nelson Airport can practically advance future works and activities commensurate to its scale and specific functional requirements. GP Investments Limited [S845.043] and Margaret Whiting and the Anmar Trust [883.005] request rule INr.60E is deleted.

Flood Areas except Flood Paths or Floodways - Flood mitigation and protection works

260. The notified rule concerns flood mitigation and protection works in relation to areas that are shown on the Flood overlays. Works that involve the operation, maintenance, renewal or minor upgrades are Permitted activities. Those activities that do not comply are restricted discretionary. The rules for this theme are REr.83F, ICr.59F, SCr.55F and INr.60F Flood Areas except Flood Paths or Floodways – Flood mitigation and protection works.

261. Kāinga Ora [S933.030] request the amendment of REr.83F Flood Areas except Flood Paths or Floodways Flood mitigation and protection works based on requesting that the flood overlays be outside of PC29 [S933.003 to S933.005]. Te Whatu Ora [S709.091] state that they approve the rule REr.83F.3 Flood Areas except Flood Paths and Floodways - Flood mitigation and protection works. Lastly, Transpower New Zealand Limited [S198.049] state that they support the retention of REr.83F.3 Flood Areas except Flood Paths and Floodways Flood mitigation and protection works. Toka Tū Ake EQC [S203.095] state that they have no change to rule SCr.55F Flood Areas except Flood Paths and Floodways Flood mitigation and protection works. Nelson Airport Limited [S478.015] requests that rule INr.60F are provided with specific exemptions or exclusions for national and regionally significant infrastructure to ensure Nelson Airport can practically advance future works and activities commensurate to its scale and specific functional requirements.

Flood Areas – Subdivision

262. The notified rule concerns the subdivision of land that is defined as Flood Area. Subdivision is Restricted Discretionary. However, where subdivision is within a High Flood Hazard, Flood Path or Floodway there are requirements in relation to the creation of vacant lots. Subdivision in the High Flood Hazard, Flood Path or Floodway that create an additional vacant allotment that locates any part of an identified building platform or access with the High Flood Hazard Overlay is a non-complying activity. The rules relating to Flood Areas Subdivision are REr.111, ICr.84, SCr.71A and INr.73A Subdivision.

263. Te Whatu Ora [S709.093] request an amendment of REr.111.3 Flood Areas Subdivision.

Discretion is restricted to:
iv. potential risk to **people,** life, property and the environment from the flood hazard;

264. Te Whatu Ora [FS73.056] provided a further submission on the matter, stating that it supports the amendment proposed by Te Whatu Ora [S709.093].

265. Toka Tū Ake EQC [S203.090] state that they do not request a change to the notified rule ICr.84 Flood Areas Subdivision. Additionally, Toka Tū Ake EQC [S203.091] state that they do not request an amendment to notified rule SCr.71A Flood Area Subdivision.

266. Te Whatu Ora [S709.130] request the following amendment to SCr.71A.3 Flood Area Subdivision, Matters of Discretion:

iv. potential risk to **people**, life, property and the environment from the flood hazard...

Toka Tū Ake EQC [FS73.058] state that they support the amendment proposed by Te Whatu Ora [S709.130].

INr.60 Inundation Overlays Low lying ground

267. The Air Training Corps Association of New Zealand Nelson Branch [780.003] asks for clarification regarding the retention of the rule INr.60 Inundation Overlays Low lying ground susceptible to localised stormwater ponding or tidal inundation. Additionally, submission point [S780.004] requests the following amendments to INr.60B.1 Flood Areas except Flood Paths and Floodways Building and below ground swimming pools if INr.60 Inundation Overlays Low lying ground susceptible to localised stormwater ponding or tidal inundation is to be removed.

> a. a below ground swimming pool that is not greater than 1m above the ground level; or
>
> b. maintenance, repair or alteration to a building which does not result in any increase to site coverage; or
>
> c. in the Flood Hazard Overlay or the Inundation Overlay, additions to an existing building, **and new buildings** that:
>
> i. is are up to ~~10m2~~ 20m2 gross floor area and
>
> ii. all additions and new buildings are up to ~~10m2~~ 20m2 gross floor area cumulatively over a 10 year period from the date of notification of the plan change...

Definitions

268. The notified PC29 definitions are:

a) Flood Area
b) Flood Path
c) Floodway

269. Kāinga Ora [S933.004] requests an amendment of the definitions to account for the removal of the proposed natural hazard flood overlay(s) from the Planning Maps by continuing to identify relevant flood hazards, but not linking these to flood hazard overlays within the District Plan maps. Transpower New Zealand Limited [S198.004], [S198.005], [S198.006] and [S198.010] request retaining the definition of "Flood Area", Flood Path, Floodway, Natural hazard overlay and the identification of these areas as notified. Manuka Street Hospital Limited [S881.004] request the simplification of the flooding related definitions [flood area, flood path, floodway] to provide for a less complex set of provisions that are easier to administer. Lastly, Te Whatu Ora [S709.025] request a definition for vulnerable people in the 'MW.iii Meaning of Words' (as used in DO2.2.5 in relation to Flood hazard: buildings and activities).

9.6.3 Evaluation

Flood Path, Floodway

270. In relation to the submissions on rule REr.82.1 and ICr.58.1 Flood Path, Floodway, REr.83D.1 and other flood hazard rules ICr.59D.1 Flood Areas except Flood Paths or Floodway, Network Utility and REr.83E.1 and ICr.59E Flood Areas except Flood Paths or Floodwasys Earthworks from numerous telecommunication organisations, Connexa et al (above) state in their reasons that the telecommunication network construction is subject to requirements under the Civil Defence Emergency Act 2002 (CDEMA), which require resilient networks. In recognition of this, the

Resource Management (National Environmental Standards for Telecommunications Facilities) (NESTF) Regulations 2016 exclude telecommunications from having to comply with natural hazard regulations. They consider the same should be applied to the NRMP. I generally agree with this position. The NESTF provides a pathway for 'regulated' activities and regulation 57 states that a territorial authority cannot make a natural hazard rule that applies to a regulated activity. It also specifies that natural hazard rule that was made before the regulations came into force, does not apply in relation to a regulated activity.

271. Regulation 57(3) further specifies that:

57 (3) In this regulation, **natural hazard rule** means a district rule that prescribes measures to mitigate the effect of natural hazards in an area identified in the district plan as being subject to 1 or more natural hazards.

272. Regulated activities include cabinets, antenna, small cell units, aerial telecommunication lines and underground telecommunication lines in specific locations such as road reserves and residential and rural zones. It may therefore be appropriate to include a note in the general section of the plan that the natural hazard rules in this plan do not apply to 'regulated activities' controlled under the NESTF.

273. For telecommunications activities that are not regulated activities I do not consider it appropriate to provide exemptions to the structures rule. I therefore recommend that the submission points of Connexa [S487.013], Chorus New Zealand Limited [S486.013], Aotearoa Tower Group Limited (trading as FortySouth [S488.013], One New Zealand Limited [S490.013], and Spark New Zealand Trading Limited [S491.013] are rejected.

274. I recommend accepting the Transpower New Zealand Limited (S198.046) submission point to retain REr.82 Flood Path, Floodway as notified.

275. The submission point Kāinga Ora [S933.030] requests the amendment of the rule REr.82 Flood Path, Floodway to align with the request to remove flood overlays from PC29 [S933.003] and any consequential amendments made as a result of this [S933.005]. Refer to Section 9 of this report in relation to the flood overlays being outside of PC29 as I reject this submission point. Given this, I recommend rejecting submission point [S933.030].

276. In relation to the submissions points from numerous telecommunication organisations to amend ICr.58.1 Flood Path, Floodway, I recommend rejecting the submission points Connexa Limited (Connexa) [S487.013], Chorus New Zealand Limited (Chorus) [S486.013], Aotearoa, Aotearoa Tower Group Limited (trading as FortySouth) [S488.013], One New Zealand Limited (One NZ) [S490.013] and Spark New Zealand Trading Limited (Spark) [S491.013] for the reason outlined in previous paragraphs in this report.

277. I recommend accepting the Nelson City Council [S947.008] submission request to delete the word "except" from ICr.58.1 (c) Flood Path, Floodway as if it is retained it implies that potentially major work is a permitted activity.

278. In relation to the Toka Tū Ake EQC [S203.092] submission request to not change the notified rule SCr.54 Floodway, I recommend accepting Toka Tū Ake EQC [S203.092].

279. I recommend rejecting both submission points, Te Whatu Ora [S709.135] and EQC Toka Tū Ake [FS73.060] regarding the inclusion of "people" in rule INr.59.5 Flood path, Floodway as "life" is included and I suggest that this includes people.

Flood Areas except Flood Paths or Floodways - Storage of hazardous substances

280. In recommend rejecting the submission point from Kāinga Ora [S933.030] to amend REr.83A Flood Areas except Flood Paths or Floodways Storage of hazardous substances in relation to not including flood hazard planning overlays in PC29. My recommendation is based on the reasons I provide in Section 9 Robustness of the river flood hazard modelling and mapping of this report.

281. Toka Tū Ake EQC [S203.068] comment on the predicted increase of the frequency of floods and the associated costs and as such oppose allowing hazardous materials to be stored within any Flood hazard overlays-hazard flood areas such as Flood Paths and Flood Ways. I recommend rejecting the submission request Toka Tū Ake EQC [S203.068] on the basis that there are sufficient provisions within REr.83A Flood Areas except Flood Paths or Floodways Storage of hazardous substances and REr.82 Flood Paths, Floodways to manage the storage of hazardous substances in high flood hazard risk areas. The rules include:

a) REr.82.3 Flood Path, Flood way requires that activities that contravene a permitted condition are discretionary. The storage of hazardous substances is an activity.

b) REr.82.4 (d) includes the following as an assessment criterion – the nature of any activity proposed, particularly if lower standards are sought and whether the activity will involve the use and storage of hazardous substances or some other sensitive use.

c) REr.83.3 includes as matters of discretion – (i) the nature of the flood event, including scale, location and (iii) frequency and the location, design and management of facilities where hazardous substances are stored, used or disposed.

282. In relation to the submission request of BP Oil NZ Ltd, Mobil Oil NZ Ltd, and Z Energy Ltd [S257.012], [S257.018] and [S257.020] to amend ICr.59A.1, SCr.55A.1 and INr.60A.1 Flood Areas except Flood Paths or Floodways Storage of hazardous substances to allow "the aboveground storage and use of a hazardous substance as a permitted activity where it is located within the flood plain and located in a manner so as to not be inundated from 1% AEP flood flows". The submitter stated "underground petroleum storage systems (UPSS) do not pose any risk to people, property or the environment during a flood event, and should not be subject to the rule. UPSS are installed according to industry regulations and codes of practice (including HSNOCOP 44 and HSNOCOP 45), which, amongst other measures, includes secondary containment system, leak detection systems, monitoring wells, a response plan for substance release, and interceptor and drainage systems. These measures act to minimise any flood hazard risk that in many cases is a better option than the equivalent aboveground structures. It would not be efficient or practical to require a resource consent and associated flood assessment for these underground structures where the land is within the 1% AEP. In addition, UPSS are often located in or below the watertable and in this sense are already inundated." I recommend accepting the BP Oil NZ Ltd, Mobil Oil NZ Ltd, and Z Energy Ltd [S257.012], [S257.018] and [S257.020] as the proposed amendment is consistent with other district plans.

283. I recommend rejecting the submission point from Toka Tū Ake EQC [S203.096] which would require that the storage and use of hazardous materials be a restricted discretionary activity in all Flood Areas. I consider that there are sufficient provisions within SCr.55A and SCr.54 to manage the storage of hazardous substances in high flood hazard risk areas.

a) SCr.54 Floodway requires that activities that contravene a permitted condition are discretionary. The storage of hazardous substances is an activity.

b) SCr.55A.3 includes as matters of discretion – (i) the natural of the flood event, including scale, location and (iii) frequency and the location, design and management of facilities where hazardous substances are stored, used or disposed.

c) SCr.55A.4 For any resource consent application under these rules the Council will consider any of the matters of restricted discretion for flood hazards in this plan relevant to the activity, and any risk to people, property, infrastructure and the environment from the flood hazard.

284. Nelson Airport has been recommended in another report (Section 42A City Centre, Commercial and Infrastructure report) to be included in the definition of regionally significant infrastructure. While I support that, I do not consider the amendments to Rules INr.60A Flood Areas except Flood Paths or Floodways Storage of hazardous substances and other Industrial zone rules INr.60B, INr.60C, INr.60D, INr.60E and Rule INr.60F (see above) is appropriate as the Nelson Airport needs to ensure its resilience and this may include restrictions or mitigations. I recommend rejecting an amendment to Rule INr.60A, INr.60B, INr.60C, INr.60D, INr.60E and Rule INr.60F Flood Areas except Flood Paths or Floodways Storage of hazardous substances to include the request for Nelson Airport Limited [S478.015] to be provided with exemptions or exclusions related to being either nationally or regionally significant.

Flood Areas except Flood Paths or Floodways - Building and below ground swimming pools

285. Te Whatu Ora [S709.090] requests that there is consistent wording for the natural hazards provisions to encompass risk to 'public health and wellbeing". I recommend rejecting this submission point on the reason provided earlier in this report. In relation to the Kāinga Ora submission point [S933.030] request to amend REr.83B in relation to not including flood hazard planning overlays in PC29, I recommend rejecting Kāinga Ora submission point [S933.030] based on the reasons provided in Section 9 of this report. I recommend accepting the Toka Tū Ake EQC [S203.069] submission stating that they do not request a change to this policy. I recommend rejecting the Manuka Street Hospital Limited [S881.026] submission point as whilst the submission suggests that the rule will require a resource consent for anything more than a very minor addition within the flood areas, the approach of PC29 is to require the consideration of proposed development in areas shown on natural hazard overlays.

286. I recommend accepting the Te Whatu Ora [S709.111] submission point stating that they approve of the ICr.59B Flood Areas except Flood Paths and Floodways.

287. I recommend accepting the submission point of Toka Tū Ake EQC [S203.070] stating that they do not request an amendment to the notified rule SCr.55B - Flood Areas except Floodway Building and below ground swimming pools . I also accept the submission point of Te Whatu Ora [S709.127]

stating that they support the notified rule SCr.55B.3 Flood Areas except Floodways - Building and below ground swimming pools.

288. In relation to GP Investments Limited [S845.041], [S845.042] and [S845.043] and Margaret Whiting and the Anmar Trust [883.003], [883.004] and [S883.005] request the deletion of rule INr.60.B Flood Areas except Flood Paths or Floodways Building and below ground swimming pools, INr.60.C Flood Areas except Flood Paths or Floodways Fence, wall, retaining wall, outside storage and INr.60.E Flood Areas except Flood Paths or Floodways Earthworks because they feel that the rules will lead to complex and expensive flood assessments which will add to the cost and delay of all development projects. I recommend rejecting the submission requests GP Investments Limited [S845.041], [S845.042] and [S845.043 and Margaret Whiting and the Anmar Trust [883.003], [883.004] and [S883.005] as flood is a significant natural hazard in Nelson and causes damage to dwellings and infrastructure. The flood hazard provisions in PC29 assist in preventing flood damage as strategies such as raising ground and floor levels can be implemented in the design process if it is known there is a potential for flood.

Flood Areas except Flood Paths or Floodways - Fence, wall, retaining wall, outside storage

289. I recommend rejecting the submission request from Manuka Street Hospital Limited [S881.027] to delete rule REr.83C Flood Areas except Flood Paths or Floodways Fence, wall, retaining wall, outside storage as I have recommended that the Flood Hazard Overlays are retained for this property, refer to Section 9 of this report. In relation to the Kāinga Ora submission point [S933.030] to amend REr.83C in relation to not including flood hazard planning overlays in PC29, I recommend rejecting this request based on the reasons provided in Section 9 of this report.

Flood Areas except Flood Paths or Floodways - Network utility

290. I recommend rejecting the Kāinga Ora submission point [S933.030] request based on the reasons provided in Section 9 of this report.

291. I recommend accepting the following submission points; Toka Tū Ake EQC [S203.071] and Te Whatu Ora [S709.091] and Transpower New Zealand Limited [S198.047) in relation to not amending the rule REr.83D Flood Areas except Flood Paths or Floodways Network utility and Toka Tū Ake EQC [S203.093] in relation to SCr.55D Flood Areas except Floodways Network utility.

292. I recommend rejecting the Te Whatu Ora [S709.112] request for the following amendments to ICr.59D.3 Flood Areas except Flood Paths or Floodways Network Utility:

<u>iii. the risk of adverse effects to other people, property, infrastructure and the natural environment including:</u>

<u>a.public health and safety; and</u>

<u>b. impacts on ecological values and values of significance to tangata whenua and public access associated with the proposed activity, including a need for flood protection works to be required to protect the utility.</u>

as these matters of discretion are not considered necessary for network utility activities.

Flood Areas except Flood Paths or Floodways – Earthworks

293. In relation to the BP Oil NZ Ltd, Mobil Oil NZ Ltd, and Z Energy Ltd [S257.019], [S257.021] and [S257.013] and submission requests to amend SCr.55E, INr60E and ICr.59E.1, Flood Areas except Flood Paths or Floodways Earthworks to exempt activities undertaken in accordance with the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NESCS). The submission states that the rule should not be more restrictive than earthworks provide for under the NESCS. I recommend rejecting the submission requests BP Oil NZ Ltd, Mobil Oil NZ Ltd, and Z Energy Ltd [S257.019], [S257.021] and [S257.013] as the rules seek to manage earthworks in a flood hazard area and exemptions in relation to contaminated soil management may not have the same outcomes as that sought by the rules.

294. I recommend accepting the Transpower New Zealand Limited [S198.048] request that the rule (REr.83E) is retained as notified.

295. I recommend accepting the Toka Tū Ake EQC [S203.094] submission point stating that they do not seek an amendment to the notified rule SCr.55E - Flood Areas or Floodways Earthworks.

Flood Areas except Flood Paths or Floodways - Flood mitigation and protection works

296. I recommend rejecting the Kāinga Ora submission point [S933.030] on the basis of the reasons provided in Section 9 of this report. I recommend accepting the Te Whatu Ora [S709.091] REr.83F.3 Flood Areas except Flood Paths and Floodways - Flood mitigation and protection works submission point.

297. I recommend accepting the submission point from Transpower New Zealand Limited [S198.049] as they state they would like REr.83F Flood Areas except Flood Paths or Floodways Flood mitigation and protection works retained as notified. I recommend accepting the submission request of Toka Tū Ake EQC [S203.095] which does not request any amendments to the notified rule SCr.55F - Flood Areas except Floodways Flood mitigation and protection works.

Flood Areas – Subdivision

298. In relation to the Te Whatu Ora [S709.093] request to amend REr.111.3 Flood Areas Subdivision to include “people” and the further submission from EQC Toka Tū Ake [FS73.056] supporting this, I recommend rejecting the request as I feel that “life” sufficiently encompasses “people”.

299. I recommend accepting the Toka Tū Ake EQC [S203.090] submission point which states that they do not request a change to the notified rule ICr.84 Subdivision in any Flood Area. I also recommend accepting the submission point from Toka Tū Ake EQC [S203.091] that no amendments are requested in relation to SCr.71A Subdivision in any Flood Area. I recommend rejecting the submission points from Te Whatu Ora [S709.130] that “people” is included in the matters of discretion in relation to SCr.71A.3 Subdivision in any Flood Area.

300. In relation to the Air Training Corps Association of New Zealand Nelson Branch [S780.003] submission request asking for clarification regarding the retention of the rule INr.60 Inundation Overlays Low lying ground susceptible to localised stormwater ponding or tidal inundation. This rule has been replaced by the notified PC29 rules. I recommend accepting in part the Air Training Corps Association of New Zealand Nelson Branch [S780.003] submission as their question has been answered in this report but I recommend rejecting the proposed amendments of Air Training

Corps Association of New Zealand Nelson Branch [S780.004]. I consider that development in an area shown on the flood overlays requires consideration in relation to flood and the permitted activity in the notified PC29 is considered to be reasonable.

Definitions

301. I recommend rejecting the Kāinga Ora [S933.004] request in relation to the removal of the flood overlays from PC29 (refer to 8.6.3 in this report).

302. I recommend accepting the Transpower New Zealand Limited submission points [S198.004, S198.005, S198.006 and S198.010] in relation to retaining the definitions of "Flood Area", "Flood Path", "Floodway" and the definition of Natural hazard overlay and the identification of identification of Natural hazard overlays as notified.

303. I recommend rejecting the Manuka Street Hospital Limited [S881.004] request as until updated flood overlays for the entire NCC local government area are introduced it will be necessary to have and refer to multiple overlays in the NRMP rules.

304. Te Whatu Ora [S709.025] has requested that 'vulnerable people' is defined in MW.iii Meaning of Words. 'Vulnerable people' is used in DO2.2.5.iv Methods rather than the policy. I recommend rejecting the Te Whatu Ora [S709.025] request as vulnerable people could include a wide range of people. It is suggested that as part of an application on the intended use of the building detail on the management of access and evacuation could be included.

9.6.4 Recommendations

305. In summary, in respect to considering the appropriateness of the Flood Hazard Rules including definitions, I recommend the following changes:

Provision(s)	Officer recommendations
ICr.59A Flood Areas except for Flood Paths or Floodways	Amend ICr.59A.1 Flood Areas except for Flood Paths or Floodways Storage of hazardous substances to add "aboveground" before storage.
INr.60A Flood Areas except for Flood Paths or Floodways	Amend INr.60A.1 Flood Areas except for Flood Paths or Floodways Storage of hazardous substances add "aboveground" before storage.
SCr.55A Flood Areas except for Flood Paths or Floodways	Amend SCr.55A.1 Flood Areas except for Flood Paths or Floodways Storage of hazardous substances add "aboveground" before storage.
ICr.58 Flood Path, Floodway	Delete "except" from ICr.58.1(c) Flood Path, Floodway

9.6.5 Minor corrections

306. It is noted in the preparation of this report that in relation to the first line of SCr.54.1 "not" needs to be deleted using Schedule 1 s16 (minor corrections).

307. The Rule REr.82.1 is intended to allow for the listed permitted activities in watercourses (Flood Paths or Floodways, refer to the Meaning of Words). It is noted that there is a typographical error in REr.82.1, it should not include Flood Overlay. The Flood Overlay is a planning map which identifies where flood hazard rules apply. The text Flood Overlay should be deleted from REr.82.1 using Schedule 1 s16 (minor corrections).

9.6.6 Section 32AA further evaluation

308. In my opinion, based on the analysis above, the amendments to:

a) ICr.59A Flood Areas except for Flood Paths or Floodways;

b) INr.60A Flood Areas except for Flood Paths or Floodways;

c) SCr.55A Flood Areas except for Flood Paths or Floodways; and

d) ICr.58 Flood Path, Floodway.

are the most appropriate provisions compared to the notified provisions. In particular, I consider that the proposed amendment regarding ICr.58 Flood Path, Floodway and "except" will clarify the intent of the rule.

9.7 Robustness of the river flood hazard modelling and mapping (Overlays)

9.7.1 Notified PC29

309. The notified plan change contains six flood overlays as follows:

a) Flood Hazard Overlay;

b) High Flood Hazard Overlay;

c) Inundation Overlay;

d) Flood Overlay;

e) Floodways Overlay; and

f) Flood Paths Overlay.

310. Section 13.2 in the Section 32 report outlines the approach relating to river flood hazard modelling and mapping in relation to PC29. Damian Velluppillai in his evidence (paragraphs 9-20) outlines the modelling and mapping situation for NCC. As seen in 13.1 of the Section 32 report specific coastal flood mapping has not been included in PC29. It is anticipated that this will occur following the climate change adaptation work.

9.7.2 Submissions

311. Submissions were received requesting the following:

a) The accuracy of High Flood Hazard and Flood Hazard overlay at property scale;

b) 19 and 23 Todd Valley Way, removal of certain High Flood Hazard and Flood Hazard overlay flood cells;

c) Flood overlays should not be included in the NRMP Planning Maps;

d) Accuracy of the river flood modelling and deletion of the High Flood and Flood Hazard overlays;

e) Amend the Inundation and Flood Path Overlays to reflect the stormwater modelling;

f) Inclusion of sea level rise in the Inundation overlay;

g) Support Council's approach to identifying locations subject to flood hazards and the flood modelling.

312. Micheal Scott [S361.001] requests the removal of the breakout of the Flood hazard overlay from Kawai Street South onto the southern end of the boundary of 206 that then goes under the house. Michael Scott [361.002] also requests the removal of the isolated squares of high flood hazard overlay on 206 Kawai St South.

313. Manuka Street Hospital Limited, requests the removal of the PC29 High Flood Hazard overlay from PC29 [S881.001], the removal of the PC Flood Hazard overlay from PC29 [S881.002] and in submission point [S881.006] the amendment of objectives and policies DO2.2.1 and DO2.2.4 in relation to the analysis of areas prone to flooding.

314. NCC [S947.007] requests the deletion of the High Flood Hazard Overlay from 23 Todd Bush Road and the Flood Hazard Overlay at 19 Todd Bush Road as shown in Appendix 5.

315. Kāinga Ora requests [S933.003] the removal of the proposed natural hazard flooding overlay(s) from the Planning Maps, and instead hold this information in non- statutory GIS maps [and make any other] consequential changes to give effect to this submission point. Additionally, Kāinga Ora [S933.005] requests that any consequential changes to give effect to the removal of the proposed natural hazard flood overlay(s) from the Planning Maps are made. Submission point no. [S933.009] requests an amendment to the rules to reflect this.

316. Two further submission points commented on S933.003: Small Time Developments [FS38.033] support the removal of the flood overlays from the Planning Maps.

317. EQC Toka Tū Ake [FS73.135], [FS73.137], [FS73.138] and [FS73.105] state that they oppose the removal of the overlays from the Planning Maps.

318. Margaret Whiting and the Anmar Trust [S883.002] and GP Investments Limited [S845.005] request the deletion of the Flood Hazard Overlay and High Flood Hazard Overlays on the basis that the overlays are inaccurate.

319. NCC [S947.006] requests the amendment of the Inundation and Flood Path Overlays to reflect the latest stormwater modelling information as shown in Appendix 5 and described below:

a) Delete the Inundation Overlay polygon applying to the site in the vicinity of 256 Vanguard Street.

b) Delete the Floodpath Overlay polygon from the vicinity of 268 Vanguard Street and 259 The Ridgeway.
c) Delete the Floodpath Overlay polygon from the vicinity of 265A and 267 The Ridgeway.

320. GC and LG Pettersson [S751.002] state that they "Generally support the Council's approach to identifying locations subject to flood hazards and the flood modelling undertaken by Tonkin & Taylor."

9.7.3 Evaluation

321. In relation to the request from Micheal Scott [S361.00 and 361.002]. The site was visited by Toby Kay and Damian Velluppillai on 7 May 2024 and by Toby Kay and myself on 11 June 2024. Damian Velluppillai provides comment in his evidence (paragraphs 38-41). Damian Velluppillai concludes that the flood model could be updated to reflect the on ground situation however, as it is unlikely to remove the property from the modelled floodplain that it is not warranted to amend the model now. I support the evidence of Damian Velluppillai and recommend rejecting the submission points [Micheal Scott S361.00 and 361.002].

322. In relation to the removal of certain flood cells at 19 and 23 Todd Valley Way, the flood mapping currently shows for the properties that they are projected to be affected by Flood Hazard and High Flood Hazard and the Floodway (river channel). Consideration of the flood model in relation to the property found that land elevation and flow transfer between the flood channel and the floodplain was not well represented at this location. This has resulted flooding on the properties being shown where it would not be expected. As a result of this, the flood mapping from the model needs to be revised. I recommend accepting the submission point [NCC S947.007]. Appendix 5 illustrates the polygons to be removed.

323. In considering whether flood overlays should be included in the NRMP planning maps, it is acknowledged that an advantage of the flood maps (overlays) is that it enables the maps to be regularly updated and reduces cost and time delays by not having to use the Schedule 1 process (amendment of plans). However, certainty is reduced if maps can be changed by the council without a robust vetting and consultation process. Placing the flood modelling information on the planning maps gives the community the greatest amount of certainty regarding whether they are in or out of the overlay and therefore whether there are standards to be met and whether consent is required. Also gives the community the opportunity through the submission process to indicate whether they agree with the mapping and if it reflects the reality of their site. A non-statutory layer is potentially subject to multiple changes, and hence the permitted threshold can change when the maps are tweaked or updated.

324. Allowing council to update the flood maps without a statutory process can be problematic in terms of fairness and transparency. People cannot submit in support or opposition to a non-statutory layer and have no recourse to challenge it in terms of RMA processes.

325. A statutory layer is also more likely to be informed by evidence, because of the rigour of the process to place it within a statutory planning document. Statutory maps can be given appropriate statutory weight in decisions-making processes.

326. In summary I do not consider that a non-statutory layer is appropriate in comparison to a robustly constructed and peer reviewed modelled flood extent placed on the planning maps through the

plan making process (which can be challenged). Given this, I recommend rejecting the submission points Kāinga Ora requests S933.003, S933.005 and S933.009].

327. On the submission points in relation to the accuracy of the river flood modelling and deletion of the High Flood and Flood Hazard overlays, Damian Velluppillai in his evidence provides comment on the flood overlays, modelling and mapping (paragraphs 10-20). Paragraphs 12-14 outline the information used to prepare the models. It is stated "It is anticipated that these models will continue to be updated and refined as new datasets (e.g. LiDAR ground information…become available and as Council funding allows". It is my opinion that the flood overlays have been developed on the data available to Council and are based on a model which should not be confused with the mapping of a real event. Models are a projection only. Additionally, it should be noted that each of the flood models have been peer reviewed. Given this, I recommend rejecting the submission points Margaret Whiting and the Anmar Trust [S883.002] and GP Investments Limited [S845.005].

328. The amendment of Inundation and Flood Path overlays based on the recent stormwater modelling will reflect the latest understanding of river flood and stormwater overland flow. Appendix 5 illustrates the flood polygons to be removed. I recommend accepting the [NCC S947.006] submission point.

329. In relation to supporting Council's approach to identifying locations subject to flood hazards and flood modelling I recommend accepting the submission of GC and LG Pettersson [S751.002].

9.7.4 Recommendations

330. In summary, in respect to the robustness of the river flood hazard modelling and mapping (Overlays), I recommend the following changes:

Provision(s)	Officer recommendations
Flood Hazard and High Flood Hazard Overlays	Amend the Flood Hazard and High Flood Hazard Overlays relating to 19 and 23 Todd Bush Road as shown in Appendix 5.
Inundation and Flood Path Overlays	Amend the Inundation and Flood Path Overlays as shown in Appendix 5 and as follows: 1. Delete the Inundation Overlay polygon applying to the site in the vicinity of 256 Vanguard Street. 2. Delete the Floodpath Overlay polygon from the vicinity of 268 Vanguard Street and 259 The Ridgeway. 3. Delete the Floodpath Overlay polygon from the vicinity of 265A and 267 The Ridgeway.

9.7.5 Section 32AA further evaluation

331. As I recommend changes to the Inundation, Flood Path, Flood Hazard and High Flood Hazard overlays further evaluation is required under s32AA. The amendments to the overlays are in my view, relatively minor and will provide the opportunity for the overlays to reflect the current situation.

9.8 Hardy, Tasman, Domett and Nile streets area, River Flood Overlay review

9.8.1 Notified PC29

332. Parts of the Hardy, Tasman, Domett and Nile streets block are affected by the High Flood Hazard and Flood Hazard PC29 Overlays.

9.8.2 Submissions

333. Numerous original submissions were received requesting the amendment of the river flood modelling and mapping and the zoning of the land (See Appendices 3 and 4 and footnote 10). The submission points have been grouped into four subthemes:

a) Revise the Brook Stream flood modelling taking into account information provided in the submission;

b) Council to complete further investigations into the High Flood Hazard and Flood Hazard overlays (in relation to the Hardy, Tasman, Domett and Nile streets area);

c) Remove the block of Domett/Tasman/Nile streets from the HDZ and that it be given the same classification as the other half of Domett St/Bridge St Black or The Wood area of Residential - Comprehensive Area/residential Lower Density area.;

d) Provide the latest flood hazard information to the public (in relation to Brook Stream flood).

Revise the Brook Stream flood modelling considering information provided in the submission

334. Tim Bayley [S20.011] requested a revision of the revised the Brook Stream flood modelling considering information provided in his submission.

335. Further submissions[9] were received in relation to this theme and the application of data from the Tonkin and Taylor report related to 107 Nile Street (refer to Damian Velluppillai's evidence (paragraphs 21-28).

[9] Robin Whalley [FS10.001], Stephen Webster [FS31.020], Dan McGuire [FS46.020], Susan Gibson [FS53.020], Robert Stevenson [FS58.020], Tāhunanui Community Hub [FS60.020], Tāhunanui Business and Citizens Assn [FS61.020], Janet Southwick [FS62.002], Carol Webster [FS66.022], Jude Osborne [FS72.020], Henry Hudson [FS74.002], Harry Pearson [FS77.020], Melinda and Craig Harvey [FS83.011] and Nicole Gibson [FS54.020].

Council to complete further investigations into the High Flood Hazard and Flood Hazard overlays (in relation to the Hardy, Tasman, Domett and Nile streets area)

336. The submission points listed in Appendix 3 request that Council complete further investigations into the High Flood Hazard and Flood Hazard overlays (in relation to the Hardy, Tasman, Domett and Nile streets area).

Remove the block of Domett/Tasman/Nile streets from the HDZ and that it be given the same classification as the other half of Domett St/Bridge St Black or The Wood area of Residential - Comprehensive Area/residential Lower Density area.

337. Many submission points requested a change in PC29 zoning from High Density Residential Zone (HDZ) to the same as the other half of Domett Street/ Bridge Street block, or The Wood area of Residential - Comprehensive Area/ Residential Lower Density Area. Some also requested a maximum height of two stories. Submissions stated the area should be rezoned due to potential flooding and also reference a fault line and liquefaction in the area. The submission points in relation to this matter are contained in Appendix 4.

338. A further submission was received from Wainui Properties Limited [FS47.007]. The submission point states "This submission does not adequately recognise the significant opportunity available at 137-155 Nile Street to accommodate residential intensification while enhancing heritage values, mitigating flooding (and other hazard) risks, and without adversely affecting the amenity of adjoining properties. The topography of the site, being on the northern side of Nile Street and having the Brook Stream to the north and Domett Street to the east means the daylight and amenity effects are able to be managed through good planning and design."

Provide the latest flood hazard information to the public *(in relation to Brook Stream flood)*

339. Janet Southwick [S740.017] requests that the latest flood hazard information is provided to the public. A further submission was received in relation to this matter, Tim Bayley [FS20.010]. The submission states "The flood overlay for the lower Brook stream is woefully in accurate.... and there is a new flood plan done Houses and Communities that shows that the culvert under Nile st will not carry the big flood and flood water will flow out onto Nile St and down Tasman St and into all the houses in the two blocks between Nile and Hardy and Domett and Alton .... these two blocks MUST be removed from the high density zones as NCC Planners have done for the blocks north of Hardy due to flood overlays being shown in these areas ....Why was this information not made public at the time of the release of Plan 29 ... when these reports from Tonkin and Taylor (requested by NCC staff) where released at least 2 months before Plan 29 came to light ....????? Withholding pertinent information is reason an automatic appeal of any decision to the Environmental Court..!!"

9.8.3 Evaluation

Revise the Brook Stream flood modelling taking into account information provided in the submission

340. In relation to revising the Brook Stream flood model, Damian Velluppillai has considered the matter and provides comment in paragraphs 21-28 of his evidence. Damian Velluppillai concludes (paragraph 28) "that the lower Brook/Waimarama Stream is an area where ongoing refinement to the model is necessary as information becomes available. Council is currently using updated

flow gauge rating information, together with observations and survey information captured from the August 2022 event to refine the calibration of the model to observed flooding. This work will also include refinement of the representation of the Nile/Tasman Street culvert. This work is currently underway and will then need to be peer reviewed. It is not available for PC29."

341. I support the evidence of Damian Velluppillai and recommend accepting in part the submission point of Tim Bayley [S20.011] and the further submission points of Robin Whalley [FS10.001], Stephen Webster [FS31.020], Dan McGuire [FS46.020], Susan Gibson [FS53.020], Robert Stevenson [FS58.020], Tāhunanui Community Hub [FS60.020], Tāhunanui Business and Citizens Assn [FS61.020], Janet Southwick [FS62.002], Carol Webster [FS66.022], Jude Osborne [FS72.020], Henry Hudson [FS74.002], Harry Pearson [FS77.020], Melinda and Craig Harvey [FS83.011] and Nicole Gibson [FS54.020]. I accept in part the submission because the evidence of Damian Velluppillai states he considered the modelling and modelling work is currently underway however, there will not be a revised model available for PC29.

Council to complete further investigations into the High Flood Hazard and Flood Hazard overlays (in relation to the Hardy, Tasman, Domett and Nile streets area)

342. In relation to Council completing further investigations into the High Flood Hazard and Flood Hazard overlay (in relation to the Hardy, Tasman, Domett and Nile Streets area) I recommend rejecting the submission points contained in Appendix 3 based on the evidence of Damian Velluppillai stating that he has considered the model. However, the review of the High Flood Hazard and Flood Hazard overlays (in relation to the Hardy, Tasman, Domett and Nile streets area) cannot be undertaken until the revision of the model is complete. If the overlays are to be amended in the future a Variation to the plan will be required.

Remove the block of Domett/Tasman/Nile streets from the HDZ and that it be given the same classification as the other half of Domett St/Bridge St Black or The Wood area of Residential - Comprehensive Area/residential Lower Density area.

343. As outlined above, flood has been considered. The submission points in Appendix 4 in relate to removing the HDZ zoning from the Domett/Tasman and Nile streets area. I recommend rejecting these for natural hazard reasons. However, I note the PC29 Section 42A - Residential report recommends some zoning amendments which may provide relief to the submitters.

Provide the latest flood hazard information to the public

344. In relation to the submission request [Janet Southwick S740.017]. Damian Velluppillai at paragraphs 26 and 27 of his evidence comments on the 'latest flood information' referred to. I agree with Damian Velluppillai's evidence and recommend rejecting this submission point [Janet Southwick S740.017].

9.8.4 Recommendations

345. In summary, in respect to the Hardy, Tasman, Domett and Nile streets area, River Flood Overlay review, I recommend that there are no amendments required.

9.8.5 Section 32AA further evaluation

346. As no changes are recommended to PC29 as a result of these general submissions no further evaluation is required under s32AA.

9.9 Glenduan – Rezoning for commercial and industrial purposes

9.9.1 Notified PC29

347. Glenduan is part of PC29 as natural hazards provisions have been introduced for this area. It is not included in the zones for intensification.

9.9.2 Submission

348. The submission point of David Rees [S598.006] requests the rezoning of Glenduan for commercial and industrial purposes.

9.9.3 Evaluation

349. Under the Operative NRMP the urban lots are zoned Residential-Lower Density. Under the notified PC29, the urban area of Glenduan is zoned Residential-Standard Area. Outside of this zone is not within the scope of the PC29. Numerous flood and geotechnical layers apply to this zone. The zone is also projected to be impacted by the coastal flood scenario 1% AEP event SSP 8.5 (H+). The 1% AEP event SSP 8.5 (H+) wave run up scenario is projected to affect properties in Seafield Terrace and some adjoining residential properties.

350. As previously stated in this report, Council is currently undertaking climate change adaption work. Given both the natural hazards outlined about and the adaptation work, it is considered premature to consider the rezoning of Glenduan for industrial or commercial land. In addition to these matters such as infrastructure including road access would require consideration. This has not been done as part of this assessment. I recommend rejecting the submission point of David Rees [S598.006].

9.9.4 Recommendations

351. In summary, in respect to Glenduan – Rezoning for commercial and industrial purposes, I consider no amendments are required.

9.9.5 Section 32AA further evaluation [if changes proposed]

352. As no changes are recommended to PC29 as a result of these general submissions no further evaluation is required under s32AA.

9.10 100 Tasman Street

9.10.1 Notified PC29

353. The notified PC29 flood overlays show that the rear part (western side) of 100 Tasman Street contains is affected by the flood hazard overlays, High Flood Hazard and Flood Hazard.

9.10.2 Submissions

354. GC and LG Pettersson [S751.001] request the deletion of the PC Flood Hazard and PC High Flood Hazard overlays at the western boundary of 100 Tasman Street. It is stated in the submission that the retaining wall in this area means that the area is no longer affected by flood.

9.10.3 Evaluation

355. A site visit undertaken by Toby Kay and Damian Velluppillai on 7 May 2024 and Toby Kay and myself on 11 June 2024 (from outside of the property).

356. Damian Velluppillai provides comment on this matter in his evidence (paragraphs 35 to 37). Damian Velluppillai states "…there is sound basis for removing the flood hazard overlay from this property. This would be best achieved by clipping the PC29 Flood Hazard Overlay and PC29 High Flood Hazard Overlay at the property boundary."

357. I recommend accepting the submission request of GC and LG Pettersson [S751.001] to remove the PC29 Flood Hazard Overlay and PC29 High Flood Hazard Overlay from 100 Tasman Street. Whilst I agree with Damian Velluppillai's evidence, I suggest that Council will need to consider future river flood modelling criteria and mapping in relation to privately owned flood mitigation structures. Note A map illustrating the recommendation has not been included as all the flood polygons affecting 100 Tasman Street would be removed from the PC29 flood overlays.

9.10.4 Recommendations

358. In summary, in respect to 100 Tasman Street, I recommend the following change:

Provision(s)	Officer recommendations
Planning maps – Flood Hazard and High Flood Hazard overlay	Removal of the PC29 Flood Hazard Overlay and PC29 High Flood Hazard Overlay from 100 Tasman Street.

9.10.5 Section 32AA further evaluation

359. As I recommend an amendment to remove the PC29 Flood Hazard Overlay and PC29 High Flood Hazard Overlay from 100 Tasman Street [GC and LG Pettersson S751.001] an evaluation is required under Section 32AA. The changes to the flood hazard overlays are more appropriate than those in the notified plan as the existing retaining wall is not reflected in the flood model (which in turn informs the flood mapping)

9.11 2 Little Todd Valley Road, removal of NRMP Flood Overlay polygon

9.11.1 Notified PC29

360. Section 15.2 (p75) of the PC29 Section 32 report outlines the notified PC29 approach regarding the flood overlays for Todds Valley which includes 2 Little Todd Valley.

9.11.2 Submissions

361. Drew Hayes [S949.001] provided an original submission requesting the removal of the NRMP Flood polygon parallel with Little Todd Valley Road which was included in the PC29. The submission states "the decision to keep the overlay following the storm event was made on assumptions that are incorrect on what culverts caused the secondary flow path to be utilised.

362. The floodpath was also not overwhelmed and remained in the road reserve.

363. This was also achieved with a greatly reduced flow path due to gravel that was scoured from Little Todd Valley unsealed section due to an undersized culvert becoming overwhelmed."

364. As part of the publication of the 2021 river flood data, Council wrote to property owners who were not included in the 2021 river flood mapping stating that the property was no longer mapped as having a river flood hazard. However, as outlined in the Section 15.2 PC29 Section 32 following the August 2022 weather event (refer to Appendix 2C of the Section 32 report) Council has decided to retain the Flood overlay polygon.

365. Further submissions were received in relation to this theme. Submissions from Robert and Lynette Taylor [FS84.001], Wayne and Lynn McNabb [FS85.001], David Read [FS86.001] and Brad Wallace [FS87.001] support the original submission.

9.11.3 Evaluation

366. In relation to the submission of Drew Hayes [S949.001], Little Todd Valley Road was visited by Toby Kay and Damian Velluppillai on 7 May 2024 and by Toby Kay and myself on 11 June 2024. Damian Velluppillai provides comment in his evidence (paragraphs 48-53). He concludes (paragraph 53) "Based on observations in other parts of Nelson during the August 2022 storm, it is likely that the storm was less than a present-day 1% AEP event in this area. We can expect that based on existing stormwater infrastructure, flows down Little Todd Valley Road to be significantly greater during a 2130 1% AEP rainfall event. This is the event used for river flood hazard mapping. Therefore, I consider it appropriate to retain the NRMP Flood Overlay at this point in time. The overlay should be reviewed when updated river modelling is available."

367. I support the evidence of Damian Velluppillai and recommend rejecting all submission points in relation to this matter [Drew Hayes S949.001], [Robert and Lynette Taylor FS84.001], [Wayne and Lynn McNabb FS85.001], [David Read FS86.001] and Brad Wallace [FS87.001].

9.11.4 Recommendations

368. In summary, in respect to 2 Little Todd Valley, removal of NRMP Flood Overlay polygon, I recommend I recommend that there are no amendments required.

9.11.5 Section 32AA further evaluation [if changes proposed]

369. As no changes are recommended to PC29 as a result of these general submissions no further evaluation is required under s32AA.

9.12 Zoning related flood matters

9.12.1 Notified PC29

370. As outlined in the Section 32 report both zoning and flood hazard overlays have been included in the notified PC29.

9.12.2 Submissions

371. Euan Laird [500.005] requests council reconsider the MDRZ zoning in the river catchment flood zone. Euan Laird states that his property is zoned Medium Density Residential under PC29 and

this zone borders the High Density Residential Zone. He questions why this area has been included for intensification in PC29 when The Wood has not.

372. Ms J Strange [601.010] requests "the amount of development of housing between Motueka st and Bishopdale Hill" is decreased.

9.12.3 Evaluation

373. Euan Laird has the address of 3 Scotland Street on the submission [Euan Laird S500.005]. The zoning of this property is zoned Residential-Lower Density under the Operative NRMP. The notified PC29 zone is Medium Density Residential. Across from Euan Laird's property (Bronte Street) the properties are zoned PC29 High Density Residential Zone. As outlined in Part 2 of the Section 32, The Wood has not been included for intensification as it is subject to both coastal and river flood and future zoning will be considered in the climate change adaptation work. The area outlined above is subject only to river flood. The flood hazard rules introduced as part of PC29 will consider development and flood hazard in this area.

374. The PC29 Section 42A report – Residential recommends amendments to the zoning of land in PC29. The submission point [Euan Laird S500.005] is recommend for rejection in relation natural hazards.

375. In relation to the submission point of Julie Strange [S601.010] concerning the zoning of the area between Motueka Street and Bishopdale Hill, Toby Kay in his evidence (paragraph 6.7) comments on the submission from a flood and stormwater perspective. He states that work was completed in 2018 on a stormwater upgrade and diversion of York Stream in the area and that flood modelling. Toby Kay states that subsequent flood modelling "has demonstrated that the additional capacity has significantly reduced stream flood extents, facilitating the development of sites that were previously in the floodplain, as well as reducing flood risk for existing development in this area." The PC29 Section 42A report (Residential) recommends amendments to zoning. The submission point [Julie Strange S601.010] is recommend for rejection in relation natural hazards.

9.12.4 Recommendations

376. In summary, in respect to Zoning related flood matters, I recommend that there are no amendments required.

9.12.5 Section 32AA further evaluation

377. As no changes are recommended to PC29 as a result of these general submissions no further evaluation is required under s32AA.

9.13 Miscellaneous matters

9.13.1 Notified PC29

378. Flood overlays and associated policies and rules were included in the notified PC29. In addition to the submission points considered above there were numerous submissions which commented a range of miscellaneous matters in relation to flood.

9.13.2 Submissions

379. Rikki-Lee Hanna [S260.002] suggests enabling underground garaging to serve as a mitigation tool to address flood risks.

380. David Gibson [S741.013] requests avoiding building multi-storey dwellings near rivers and streams. He states that there is a "risk of foundation erosion and damage caused by flooding coupled with multi-story buildings placed increased pressure on the footprint". He also states "then add into the equation a minimum green zone as specified in PC29 of only 20% which severely impacts the absorbent ground available to assist drainage of flood water."

381. Hazel Thelin [S86.004] requests the amendment of daylight angles applying to areas with a natural flood hazard (sea, river, overland flow) to either:

a) Waive compliance with daylight angles, or

b) Allow the finished floor levels of existing residence to be raised clear of the 1 in 500 year flood level

382. Hazel Thelin [S86.011] also requests the amendment of the plan to raise the finished floor levels within areas of flood inundation from coastal or river to 1:500 year, and to include this within residential zoning areas.

383. Nelson City Council [S947.009] requests the following: "Ensure that references to sea level rise in relation to levels, terminology and year are consistently referenced in the chapters amended by Plan Change 29."

384. Alistair Kwan requests the following: [S623.024] "Treat the Maitai as one of the cities circulation arteries. Provide direct access to the water – e.g. by steps and beaches - so that we can interact with the river, versus merely seeing it at a distance" and [S623.025] "Re-open The buried rivers, and develop them as intervention nuclei for the inner city's leisure space and commercial reinvigoration. As a model, consider the Canal St-Martin in Paris, and the Cheonggyecheon in Seoul."

385. James Genever [S611.002] suggests that the proposed Maitahi/Bayview development should be ringfenced as a recreational forest reserve area not subjecting it to new urban sprawl (intensification or otherwise).

386. Annette (Nettie) Barrow [S82.021] requests that new builds in areas threatened with water inundation are removable.

9.13.3 Evaluation

387. In relation to the submission request of Rikiki Lee-Hanna to enable underground garaging as a flood mitigation measure Toby Kay provides comment in his evidence (paragraph 8.2). Toby Kay states that underground garages in flood plains can be problematic due to the risk of water ingress. He notes that a significant number of underground garages were inundated during the August 2022 flood. Toby Kay also notes that the IPN contains minimum freeboard requirements for attached and detached garages and that raising the floor level above the inundation level will reduce the risk of damage to private property…. I agree with Toby Kay's response and recommend rejecting the submission point of Rikki-Lee Hanna [S260.002].

388. Regarding the submission point of David Gibson [S741.013] in relation to avoiding building multi-storey dwellings near rivers and streams. I suggest the following, that the notified PC29 flood hazard provisions require the consideration of development in relation to Floodways and Flood paths (REr.82, Flood Path, Floodway and a similar rule in the other PC29 zones). There are numerous occasions where the Floodway or Floodpath is partially located on residential property. Activities that are not a Permitted Activity (this activity predominantly relates to utility works) are restricted discretionary. Additionally, the discretionary matters in the flood hazard rules (REr.83A-REr.38F and REr.111 and similar rules in the other PC29 zones) include the consideration of the location of the proposed development, the need to operate in the hazard area (this would also include within the vicinity of it) and the risk to people, property and the environment. I suggest that PC29 contains sufficient provisions to address this submission request and recommend rejecting the submission point of David Gibson [S741.013].

389. The submission point of Hazel Thelin [S86.004] requests amendments in relation to flood and daylight angles. I suggest that the definition of Ground level included in PC29 takes into account the consideration of daylight angles and development in a flood hazard area through the use of (b) finished ground level. I feel that this definition sufficiently addresses the submission request and recommend rejecting Hazel Thelin [S86.004].

390. In relation to raise floor levels within areas of flood, the IPN provides guidance on floor levels in relation to flood. Toby Kay in his evidence outlies the management of flood and new developments in areas proposed for intensification (paragraphs 6.1-6.4). Paragraph 6.3 in Toby Kay's evidence states that the IPN promotes a 100 year planning horizon for the assessment of suitable ground and /or floor levels for new development. He also states that " A 100 year time frame has also been adopted for PC29 future 2130 flood overlays, including the Flood Hazard Overlay and the High Flood Hazard overlay. As stated in this report, Council climate change adaption work is being undertaken, it is anticipated that following this work, ground and floor levels would be reviewed. I recommend rejecting the submission point of Hazel Thelin [S86.011] on this basis.

391. The references to sea level rise require review and amendment for consistency and accuracy. I recommend accepting the submission point of Nelson City Council [S947.009] and including the following amendment to the Flood Area rules Explanation (REr.83A.5 ICr.59A to ICr.59F.5 and SCr55A.5 to SCr.55F.5 INr.60A.5 to INr.60F.5 Explanation

392. The Flood Areas reflect both historic observed areas of flooding and more recent river flood modelling commissioned by the Council. The recent 2130 river flood mapping incorporates a 1% storm event, including climate change and sea level rise under the RCP8.5M scenario.

393. In relation to the submission of Alistair Kwan [S623.024] regarding the Maitai River. Damian Velluppillai's evidence (paragraph 29) describes the "sponge city' concept which includes the daylighting of streams. Toby Kay addresses the submission points in his evidence (paragraph 8.4). Whilst agreeing with Dr Kwan on the opportunities, Toby Kay states that the main challenge is in areas such as the "lower end of St Vincent and Vanguard streets is the culverted streams are located beneath the road carriageway." Toby Kay suggests that there may be opportunities in association with the climate change adaptation work. I agree with Toby Kay's evidence and recommend rejecting Alistair Kwan's submission point [S623.024].

394. Concerning the submission point of James Genever [S611.002]. The Maitahi development area is not within the PC29 extent. Given this the submission point is unable to be considered as it out of scope. Whilst the Bayview development area is within the PC29 extent it is suggested as the rezoning matter is proceeding through the legislative process that it is not possible to consider an alternative to residential development as part of PC29. I recommend rejecting the submission point of James Genever [S611.002].

395. In relation to the submission point of Annette (Nettie) Barrow [S82.021] suggesting that new builds in flood areas should removable, I consider that the notified PC29 provisions are sufficient to address both these requests. The consideration of dwellings being shifted in response to anticipated flood events is likely to be raised in the climate change adaptation work. On this basis I recommend rejecting the submission point of Annette (Nettie) Barrow [S82.021].

9.13.4 Recommendations

396. In summary, in respect to the Miscellaneous matters, I recommend the following change:

Provision(s)	Officer recommendations
REr.83A.5 ICr.59A to ICr.59F.5 and SCr55A.5 to SCr.55F.5 INr.60A.5 to INr.60F.5 Explanation	Amend the Explanations to state the following: The Flood Areas reflect both historic observed areas of flooding and more recent river flood modelling commissioned by Council. The recent 2130 river flood mapping incorporates a 1% storm event, including climate change and sea level rise under the RCP8.5M scenario.

9.13.5 Section 32AA further evaluation

397. As I recommend an amendment to the flood hazard rule Explanations an evaluation is required under Section 32AA. I consider that the amendments provide greater clarity regarding the nature of the modelling and mapping associated with the flood hazard rules and will be more helpful to users of the plan to understand the assumptions in the modelling.

Reinstatement of the Maitai River Floodway Overlay

398. In the preparation of the PC29 ePlan the Maitai River Floodway which is part of the new PC29 river flood overlay has been omitted. This omission has been identified by Council outside of a submission as a matter that requires correction. It is considered that as other Floodways were shown in ePlan and the rules provide for Floodways that this matter has not affected the community's understanding of PC29. I consider it appropriate to address this matter in a Variation to the NRMP.

399. I also note that there is a naming error in the heading where it refers to the Inner City Residential Zone. Whilst there is no submission requesting this 'Inner City Residential Zone' heading be corrected I consider it appropriate to amend it to the correct name 'Inner City Zone', using Schedule 1 s16 (minor corrections). The amendments I recommend are provided below.

10.0 Consideration of submissions and further submissions– Slope instability and Debris run-out

10.1 Overview of submissions received

400. A large number of submissions were made in relation to the objectives, policies, rules, and mapped slope instability and debris run out overlays (referred collectively hereafter as the slope instability areas/overlays).

401. Given the large number of submissions received, this report focusses on the key themes and sub themes raised. Having reviewed the submissions in detail, the following are what I consider to be the key matters in contention for this topic, and I therefore focus my analysis on these matters:

a) Slope instability hazard – general matters;

b) The appropriateness of the slope instability policies;

c) The appropriateness of the slope instability rules;

d) The robustness of the slope instability hazard mapping;

e) Site specific matters for slope instability overlay areas.

402. These key themes form the basis of my assessment below. For ease of reading, this report uses references to submission numbers sparingly and groups key submission points by themes.

403. My recommendations in relation to all submission points on this topic are included at Appendix 1.

10.2 Slope instability hazard – general matters

10.2.1 Notified PC29

404. This section discusses general matters raised in submissions and further submissions that do not relate to a specific provision, but rather focus on the approach to slope instability hazards and intensification in PC29.

10.2.2 Submissions

405. The main matters in contention raised by submitters and further submitters in relation to slope instability hazard – general matters are:

a) Submitters who consider upzoning to HDZ, MDZ or housing intensification generally to be inappropriate in the Tosswill/Tamaki Street and general Tāhunanui hills' area because the area has slope instability and that a GRZ or no upzoning at all was more appropriate.

b) Submitters who supported areas not provided with upzoning in PC29 due to slope instability such as the Tāhunanui Slump (Toka tu Ake (EQC) [S203.001]).

c) General support for a geotechnical requirement for slip prone sites.

406. Anne and Andrew Weir [S448.013] request that the General Residential Zone be applied to the Tosswill Road Area. Michelle Collier [s546.022], Philip Guy [S627.004] and David Collier [S190.001] request that MDZ and HDZ be removed from Tosswill Road and Tamaki Street and general Tāhunanui Hills area and consider the area is not appropriate for 3-6 storey intensification. Jan Jordan [754.041] and David Collier [S531.029] specifically requested that the Tāhunanui hills area be removed from the High Density Residential Zone. More generally Michael Rose (Rose Family Trust) [S781.013] considered the mapping should be refined in the Tāhunanui hills area.

407. The submission of Michelle Collier [s546.022] received three further submissions [FS61.060, FS72.064, FS60.056] in support as did the submission of Philip Guy [S627.004] [FS61.089, FS72.093, FS60.085]. The submission of David Collier [S190.001] received three further submissions [FS61.061, FS72.065, FS60.057] in support and the submission of Jan Jordan [S754.041] also received three further submissions [FS61.042, FS72.046, FS60.038] in support.

408. In a similar vein Diane Rose [S312.003], Maureen Doherty [S479.003], Michael Rose (Rose Family Trust) [S781.004], Jeanette Dungan [S809.003], Lilia and Eugen Grab [S893.003], and Pip Swale [S481.003] more generally opposed the proposed HDZ in residential areas where there is a risk of increasing natural hazards (e.g. floods and land instability).

409. Peter Kortegast and Sue Ware [S941.003] consider that all land with a land instability overlay should be excluded from housing intensification. This was also the tenor of the submission point of Michael Rose [S781.013].

410. Toka tu Ake (EQC) [S203.001] support not providing intensification in areas subject to coastal inundation, and the active Tāhunanui Slump. While Stephanie Phillips [S597.023] supported geotechnical requirements for slip prone areas.

411. The submission of Toka tu Ake (EQC) [S203.001] received five submissions[10] in opposition and one submission [FS56.001] in support.

10.2.3 Evaluation

412. The Tosswill Road area, in general, has parts located within a Slope Instability Overlay and areas not located within a Slope Instability Overlay. I visited the area subject to the submissions on 8 May 2024 and noted that the area lies both between and across areas identified as 'old sea cliff' (Slope Instability Area 2 Overlay) and an area identified as Slope Instability Area 3 Overlay. For the parts outside any slope instability overlay, while steep in parts, the contour has been altered by existing development such that in terms of the decision tree outlined in the evidence of Mr Chamberose the area is not steep enough to be identified within Slope Instability Area 3 Overlay.

413. Mr Chamberose advised that any new building in this area (up to 6 storeys) would require engagement of a geotechnical engineer for site specific building design under the Building Act and that at this level of susceptibility this would be sufficient to capture any slope instability hazard in this location. Mr Chamberose overall considers that the susceptibility of the site to slope movement is low.

414. In respect to the submitters with a more general concern about intensification in areas susceptible to slope instability, it is noted that for all land within a Slope Instability Overlay a geotechnical report is required at an earlier stage in the development process and is required to address

[10] FS41.007, FS43.008, FS44.008, FS45.008, FS49.007

specific assessment criteria through the additional resource consenting processes. Given these added processes it is not considered appropriate that all land within a Slope Instability Overlay or any other natural hazard overlay should be blanket excluded from housing intensification. I recommend that these more general submissions[11] be rejected. It is noted, however, that some areas have not been upzoned due to the natural hazard risks and that includes Slope Instability Area 1, and other specific areas such as The Wood, which are located in the High Flood Overlay and the Coastal Flood mapping.

415. There may be other planning reasons why the Tosswill Road / Tamaki Street area should not be upzoned to MDZ or HDZ, or included for any intensification under the GRZ. I note that recommendations are included in the Residential Report to remove the HDZ from PC29 altogether and this may provide the relief the submitters seek. However, I accept the opinion of Mr Chamberose, that slope instability matters in this location are not insurmountable and can be addressed through the natural hazard slope instability provisions where they apply and/or by the Building Consent process and the subdivision process where a subdivision is proposed. Consequently, I recommend that this group of submissions[12] be rejected.

416. The further submissions to the above submissions have my recommendation recorded in Appendix 1.

417. The seaward extent of the PC29 intensification zoning has been discussed in other reports and at the beginning of this report and I do not intend to repeat this here. With respect to the Tāhunanui Slump, I note that this area of active slope instability has been recognised for some time and is identified in the operative NRMP. The Tāhunanui Slump area is identified as Slope Instability Area 1 Overlay within PC29, and contains a similar suite of rules to the operative plan. Mr Chamberose deals with the identification of Slope Instability Area 1 overlay in his evidence.

418. I accept the evidence of Mr Chamberose that this is an area of active slope instability and given that there are no submissions opposing Slope instability Area 1, I recommend that the support of Toka tu Ake (EQC) [S203.001] be accepted.

419. The further submission [FS56.001] supporting the submission of Toka tu Ake (EQC) [S203.001] is recommended to be accepted and the further submissions[13] in opposition are recommended to be rejected.

420. Finally, given that I will be generally recommending that the requirement for geotechnical assessment in slip prone areas in the overlays be retained I recommend that the submission point from Stephanie Phillips [S597.023] be accepted.

10.2.4 Recommendations

421. In summary, in respect to the slope instability areas – general matters, I recommend that the slope instability overlays as provided for in PC29 for the Tosswill/ Tamaki Street area be retained as notified; I consider no extensions to the slope instability overlay areas are warranted. In addition, while changes are being recommended to the intensification provisions which will apply to this

[11] S312.003, S479.003, S781.004, S809.003, S893.003, S481.003, S941.003, S781.013

[12] S448.013, S546.022, S627.004, S190.001, S312.003, S531.029, S479.003, S754.041.

[13] FS41.007, FS43.008, FS44.008, FS45.008, FS49.007

area, concern in respect to slope instability hazard is not a matter that contributes to those recommended amendments.

422. No amendments are recommended to PC29 as a result of these general submissions.

10.2.5 Section 32AA further evaluation

423. As no changes are recommended to PC29 as a result of these general submissions no further evaluation is required under s32AA.

10.3 The appropriateness of the slope instability and debris run-out policies

10.3.1 Notified PC29 – Policies DO2.2.16-DO2.2.18

424. This section discusses three slope instability policies DO2.2.16 to DO2.2.18 included in the notified PC29:

DO2.2.16 relates specifically to Slope Instability Area 1 (Tāhunanui Slump), DO 2.2.17 relates specifically to Slope Instability Areas 2 and 3, and the Debris Run-out Area, and DO2.2.18 is a general policy relating to activities in Slope Instability Areas 1, 2 and 3.

DO2.2.16 Slope instability risk: subdivision and residential development in Slope Instability Area 1:

> In Slope Instability Area 1:
>
> 1. avoid subdivision other than for public open space or network utility subdivisions; and
> 2. avoid new residential development unless:
>   a. it results in no more than one residential unit per site and is supported by a geotechnical assessment, by a suitably qualified geotechnical or engineering geologist specialist, demonstrating that the risk from slope instability and slope failure to people, property and infrastructure can be appropriately mitigated; and
>   b. does not transfer the risk of slope instability either within the site or to any other sites; or
>   c. the building is small scale and accessory to, or an addition to, an existing residential unit.

DO2.2.17 Slope instability Areas 2 and 3, and debris run-out area: subdivision, use and development:

> Manage subdivision, use and development within Slope Instability Areas 2 and 3 and the Debris Run-out Area by:
>
> 1. requiring that a site-specific geotechnical assessment is undertaken before subdivision, use or development takes place, taking into consideration the potential slope instability hazard; and
> 2. ensuring that the risk to people, property and infrastructure is appropriately mitigated; and
> 3. ensuring that hazard mitigation and remediation works are effectively implemented and do not increase or transfer risk to adjacent properties;
>
> unless

4. the building is a small-scale addition, or accessory building, to an existing building.

DO2.2.18 Activities in Slope Instability Areas 1, 2 and 3:

Ensure that activities in Slope Instability Areas 1, 2 and 3 do not exacerbate or increase the risk of slope failure or debris run-out, both onsite and offsite, by managing:
1. the depth and volume of earthworks; and
2. the discharge of stormwater and wastewater; and
3. the weight of structures that could increase the risk of slope failure from loading.

10.3.2 Submissions

425. Zero Carbon Nelson Tasman [S324.025, S324.026] seek amendment to policies DO2.2.16-DO2.2.17 to require a panel of experts to determine setback distances for development, and in respect to DO2.2.16 request removal of existing use rights from the most unstable areas.

426. Toka Tū Ake EQC [S203.013, S203.014, S203.015], Transpower New Zealand Limited [S198.025, S198.024] seek that the three policies for slope instability and debris run-out be retained, while Te Whatu Ora [S709.034] supports Policy DO 2.2.16 (Slope instability Area 1) for the Tāhunanui Slump. In addition, Toka Tū Ake EQC [S203.014] request that a definition of the level of slope instability risk mitigation deemed "appropriate" be included in PC29 or to alternatively remove references to "appropriate" risk mitigation from DO2.2.17.

427. Kirsten Brown [S561.002] expressed concern that the site specific geotechnical assessments required by Policy 2.2.17 should be appropriate to the level of risk.

428. The submissions of Toka Tū Ake EQC [S203.013, S203.014, S203.015] received 15 further submissions[14] in opposition. The submission of Te Whatu Ora [S709.034] received three further submissions [FS61.062, FS72.066, FS60.058] in support.

10.3.3 Evaluation

429. Toka Tū Ake EQ [S203.013, S203.015], Te Whatu Ora [S709.034] and Transpower New Zealand Limited [S198.025, S198.024] generally support Policies DO2.2.16-DO2.2.18 and I consider it is appropriate to recommend that these submission points be accepted and that the provisions generally be retained as notified. This is because there is very limited opposition to these policies from other submitters.

430. The further submissions[15] opposing the submissions of Toka Tū Ake EQC [S203.013, S203.015] are recommended to be rejected. The further submissions [FS61.062, FS72.066, FS60.058] supporting the submission of Te Whatu Ora [S709.034] are recommended to be accepted.

431. Sue Robb and I met with Toka Tū Ake EQC to discuss its full submission and discussed the request to remove or define 'appropriate' in Policy DO2.2.17 (Toka Tū Ake EQC [S203.014]). After those discussions Toka Tū Ake EQC accepted that it would be difficult to define 'appropriate' to cater for the wide range of situations the policy was intended to cover and that what mitigation is

[14] FS41.020, FS43.020, FS45.020, FS49.025, FS44.102, FS41.021, FS43.021, FS44.020, FS45.021, FS49.026, FS43.022, FS44.021, FS45.022, FS49.027, FS41.106

[15] FS41.020, FS43.020, FS45.020, FS49.025, FS44.102, FS43.022, FS44.021, FS45.022, FS49.027, FS41.106

'appropriate' in any particular circumstance would depend on the expert advice received on a case-by-case basis. Consequently, I recommend that the submission of Toka Tū Ake EQC [S203.014] be rejected in respect to the request to remove or define the word 'appropriate' from Policy DO2.2.17.

432. The further submissions [16] opposing the submission of Toka Tū Ake EQC [S203.014] are recommended to be accepted.

433. In respect to Zero Carbon Nelson Tasman [S324.025, S324.026] submission points, I consider that the policies themselves do not need to identify a panel of experts to determine setback distances for development. Appropriate setbacks could potentially be the focus of a geotechnical assessment (determined by a suitably qualified geotechnical engineer). However, there are cost implications of using a panel approach as a policy requirement, if it was to be applied to every development within slope instability areas. As a separate issue, the policies themselves do not prevent the Council from setting up a geotechnical review panel to assess geotechnical assessments where required. In a similar vein I do not consider that the policies themselves are the appropriate place to indicate the scale of assessment required for any particular project but rather it will be implementation of the policies that will determine that. Consequently, I recommend that the submission of Kirsten Brown [S561.002] be rejected.

434. I also recommend that the submission points of Zero Carbon Nelson Tasman [S324.025, S324.026] be rejected.

10.3.4 Recommendations

435. In summary, in respect to the slope instability policies DO2.2.16-DO2.2.18, I recommend the policies be retained as notified. However, later in this report I will be recommending changes to rules which will result in consequential changes to these policies. These changes will relate primarily to the naming of the overlays.

10.3.5 Section 32AA further evaluation

436. As no changes are recommended to PC29 as a result of these submissions no further evaluation is required under s32AA.

10.4 The appropriateness of the slope instability and debris run-out areas rules and definitions

10.4.1 Notified PC29

437. This section discusses the slope instability rules and associated definitions included in notified PC29.

438. As identified in the s32 Report at pages 82-83, the rules associated with the slope instability areas are included in Chapter 7 Residential Zone, Chapter 8 Inner City Zone and Chapter 9 Suburban Commercial Zone. A summary of the provisions is also provided in the s32 at page 82-83 which I will not repeat here. The Residential Zone rules comprise REr.75 to REr.75U and REr.112A to REr.112D, covering the three slope instability overlays and the debris run-out overlay. The Inner City Zone rules comprise ICr.71A to ICr.71O and ICr.85 to ICr.87 and do not contain any Slope

[16] FS41.021, FS43.021, FS44.020, FS45.021, FS49.026

Instability Area 1 rules. In the Suburban Commercial Zone the relevant rules are SCr.70A -SCr.70U and SCr.75 to SCr.78. The rules generally address new residential units, accessory buildings, additions to buildings, earthworks, stormwater and wastewater, large structures, and subdivision. The exception to this is in the Debris run-out areas which only address new buildings, additions to buildings, accessory buildings and subdivision.

439. There are no slope instability specific definitions in the notified PC29.

10.4.2 Submissions

440. Submissions concerning the Slope Instability rules and associated definitions generally include the following matters:

a) Support for the provisions to be retained.

b) A geotechnical certification process should be implemented for existing properties to enable exemption from the new resource consent requirements, where site specific geotechnical information exists.

c) Deletion of all rules in Slope instability Area 1 &2, or amendments to reduce the scope of the rules or provide practical exemption.

d) Utility providers who seek inclusion of a note to exempt structures associated with telecommunication network utilities from the Slope instability overlay rules in the Residential and Inner City Zones.

e) Review and correction of the numbering and cross referencing where errors have been picked up by submitters.

441. Damien Taylor [S519.001] requests in respect to Slope Instability Area 2 that a certification process be put in place so that developments which have already gone through subdivision engineering approval do not have to apply for land use consents under the new provisions. Similarly, submitters[17] request practical exemptions from the rules if their land (within Slope Instability Area 2 & 3) has been recently assessed and certified by a qualified geotechnical professional. These submitters also requested that their sites be removed from the overlays. This latter aspect is discussed in a later section of this evidence.

[17] S755.007, S768.011, S767.013, S766.012, S845.048, S768.012, S767.014, S766.014, S755.023, S845.049, S768.013, S767.015, S766.015, 755.024, S845.050, S768.014, S767.016, S766.016, S755.025, S845.051.

442. The submissions of Bayview Nelson Limited[18] received four further submissions[19] in opposition. The submissions of 588 Limited [20] received four further submissions [21] in opposition. The submissions of GP Investments[22] Limited received four further submissions[23] in opposition.

443. Connexa [S487.012], Chorus New Zealand Limited [S486.012], Aotearoa Tower Group Limited (trading as FortySouth [S488.012], One New Zealand Limited [S490.012], and Spark New Zealand Trading Limited [S491.012] seek the inclusion of a note to REr.75 and INr.71 to the effect that these rules do not apply to telecommunication network utilities. Toka Tū Ake EQC [S203.026, S203.028, S203.030, S203.032, S203.034] seeks that the Rules REr75B to REr.75F be retained as notified. Multiple further submissions were received to these submissions particularly those relating to Toka Tū Ake EQC's submissions and are identified in Appendix 1.

444. Connexa [S487.011], Chorus New Zealand Limited [S486.011], Aotearoa Tower Group Limited (trading as FortySouth [S488.011], One New Zealand Limited [S490.011], and Spark New Zealand Trading Limited [S491.011] also seek amendments to the earthworks rules in the slope instability overlays to provide a permitted pathway for trenching, and filling of trenches, for telecommunication network utilities in the Residential and Inner City Zones. Toka Tū Ake EQC [S203.026] requested the rule be retained. Multiple further submissions were also received to these submissions and are identified in Appendix 1.

445. Nelson North Limited, Suffolk Heights Limited, Bayview Nelson Limited, 588 Limited, and GP Investments Limited[24] consider that Rules REr.75G.1 to REr.75R.1 should be deleted, the scope of the rule significantly reduced or provided with practical exemptions or otherwise amended. These submission points cover all the Slope Instability Areas 2 and 3 overlay rules in the Residential Zone. No specific preferred wording is provided. Toka Tū Ake EQC [S203.036, S203.039, S203.040, S203.043, S203.046, S203.049, S203.059, S203.065] on the other hand, consider that Rules REr 75F.1 to REr.75L.1 and REr.75O, REr.75R.1 and REr.75S as well as REr75U should be retained as notified. These submissions received further submissions as identified in Appendix 1.

446. In respect to the Residential Zone subdivision rules for Slope instability Areas 2 and 3, Nelson North Limited [S755.011, S755,036], Suffolk Heights Limited [S768.025, S768.026], Bayview Nelson Limited [S767.030, S767.031], and 588 Limited [S766.030, S766.031] seek that rule REr.112B and REr.112C be deleted, given that in subdivision applications involvement of

[18] S767.013, S767.014, S767.015, S767.016

[19] FS73.088, FS73.089, FS73.090, FS73.091

[20] S766.012, S766.014, S766.015, S766.016

[21] FS73.068, FS73.069, FS73.070, FS73.071

[22] S845.048, S845.049, S845.050, S845.051

[23] FS73.115, FS73.116, FS73.117, FS73.118

[24] S755.007, S768.011, S767.013, S766.012, S845.048, S768.012, S767.014, S766.014, S755.023, S845.049, S768.013, S767.015, S766.015, S755.024, S845.050, S768.014, S767.016, S766.016, S755.025, S845.051, S768.015, S767.01, S766.017, S755.026, S845.052, S768.016, S767.018, S766.018, S755.033, S845.053, S755.008, S768.017, S767.019, S766.019, S845.054, S768.018, S767.020, S766.020, S755.018, S845.055, S768.019, S767.021, S766.021, S755.019, S845.056, S768.020, S767.022, S766.022, 755.020, S845.057, S768.021, S767.023, S766.023, S755.021, S845.058, S768.022, S767.024, S766.024, S755.022

geotechnical engineering experts occurs as a part of dealing with the requirements of the Fourth Schedule and Section 106 of the Act. Megan Courtney [S517.001] seeks that subdivision in Slope Instability Area 3 be amended to a controlled activity, and should not capture unit title development subdivision occurring within an existing building [S517.007]. Toka Tū Ake EQC [S203.087] seeks that REr.112D relating to subdivision in the Debris Run-out Area be retained.

447. The submissions of Bayview Nelson Limited [S767.030, S767.031] each received one further submission [FS73.100, FS73.101] in opposition. The submission of Toka Tū Ake EQC [S203.087] received five submissions in opposition.

448. Transpower New Zealand Limited [S198.043, S198.044, S198.045] seeks amendment to REr.75M, REr.75N and REr.75O to correct the cross references to the assessment criteria and explanations.

449. Toka Tū Ake EQC [S203.037, S203.041, S203.044, S203.047, S203.060, S203.027, S203.029, S203.033, S203.035, S203.042, S203.045, S203.048, S203.061, S203.062, S203.063, S203.064 S203.066, S203.067, S203.088, S203.031, S203.033, S203.038, S203.089] seek that all the Slope Instability Area rules in the Inner City Zone and Suburban Commercial Zone be retained. These submissions received further submissions in opposition as indicated in Appendix 1.

10.4.3 Evaluation

450. Connexa et al (above) state in their reasons that telecommunication network construction is subject to requirements under the CDEMA, which require resilient networks. In recognition of this, the NESTF exclude telecommunications from having to comply with natural hazard regulations. Connexa et al consider the same should be applied to the NRMP. I generally agree with this position although I note that the NBEA has been appealed. The NESTF provides a pathway for 'regulated' activities and regulation 57 states that a territorial authority cannot make a natural hazard rule that applies to a regulated activity. It also specifies that natural hazard rule that was made before the regulations came into force, does not apply in relation to a regulated activity. Regulation 57 (3) further specifies that:

> 57 (3) In this regulation, **natural hazard rule** means a district rule that prescribes measures to mitigate the effect of natural hazards in an area identified in the district plan as being subject to 1 or more natural hazards.

451. Regulated activities include cabinets, antenna, small cell units, aerial telecommunication lines and underground telecommunication lines in specific locations such as road reserves and residential and rural zones. It may therefore be appropriate to include a note in the general section of the plan that the natural hazard rules in this plan do not apply to 'regulated activities' controlled under the NESTF.

452. For telecommunications activities that are not regulated activities I do not consider it appropriate to provide exemptions to the structures rule and consider that these rules in Slope Instability Areas 1 and 2 should be retained as notified. However, later I recommend removal of the structures rule altogether from Slope Instability Area 3 and this may provide some relief to these submitters. I therefore recommend that the submission points of Connexa [S487.012], Chorus New Zealand Limited [S486.012], Aotearoa Tower Group Limited (trading as FortySouth [S488.012], One New Zealand Limited [S490.012], and Spark New Zealand Trading Limited [S491.012] are accepted in part. The submissions of Toka Tū Ake EQC [S203.028 and S203.039] to retain the structures rule in Slope instability Areas 1 and 2 are accepted.

453. The recommendations on the numerous further submissions received to the submission points in the above paragraph are contained in Appendix 1.

454. For similar reasons to the above discussion, I also recommend that Connexa [S487.011], Chorus New Zealand Limited [S486.011], Aotearoa Tower Group Limited (trading as FortySouth [S488.011], One New Zealand Limited [S490.011], and Spark New Zealand Trading Limited [S491.011] in respect to its request for exemptions to the earthworks rules also be rejected. Finally, since I am recommending the earthworks rules be retained as notified (with only minor changes) I also recommend that the submission points of Toka Tū Ake EQC [S203.036, S203.026] are accepted. Recommendations on the further submissions received to these submission points are contained in Appendix 1.

455. In respect to the submission points of Nelson North Limited, Suffolk Heights Limited, Bayview Nelson Limited, 588 Limited, and GP Investments Limited, in relation to the rules in the Slope Instability Areas, I note that they do not oppose the rules that apply to Slope Instability Area 1 and acknowledge that this is a well-known active slope instability area (Tāhunanui Slump). The focus of their submissions are with Slope Instability areas 2 & 3, both in terms of the rules and the accuracy of the overlays. I understand that these submitters will be providing evidence at the hearing that may enable reconsideration of some land/sites within these two overlays. If some of the areas are able to be successfully removed from the overlays that may meet some of the concerns in respect to the rules.

456. As mentioned above Nelson North Limited, Suffolk Heights Limited, Bayview Nelson Limited, 588 Limited, and GP Investments Limited oppose the proposed Slope Instability Area 2 & 3 rules as amongst other things, they consider the additional costs to landowners and increases to the Council's compliance team workload will be considerable. I agree that Slope Instability Area 3 is a large area identified due to its steepness greater than 35 °or with slopes between 20-35° with geomorphic evidence of instability (see Decision tree methodology in the evidence of Mr Chamberose) and it is likely to cause a significant number of resource consent applications, the administration of which may not be justified for the benefit gained above that which is not otherwise covered in the subdivision and Building Consent processes. Consequently, I consider it more appropriate to delete the rules relating to structures, new residential activities, additions and alterations and accessory buildings (REr.75O, REr.75P, REr75Q and REr75R). The proposed deletions are shown below.

457. Subdivision will identify appropriate building platforms and apply conditions and consent notices in respect to geotechnical issues. The subdivision rules in the plan coupled with the Building Consent process is likely to be adequate enough in this wider slope instability area to address slope instability hazards. It is not the most robust outcome from a natural hazard management perspective but balances efficiency and effectiveness and costs and benefits of requiring resource consent applications potentially over a very large area. Overtime more investigations of specific areas within Slope Instability area 3 may enable this larger area to be re-categorised if the susceptibility is found to be greater and warranting greater consideration.

458. With respect to REr75M (stormwater and wastewater), I agree with submitters that it may be appropriate to reduce the scope of this requirement so that it does not apply to all roofs and hardstand areas. I consider that it is more appropriate that the rule be limited to areas greater than 10m2. This will mean that the stormwater runoff from small buildings (sheds) and small

areas of hardstanding, which will have a minimal impact on run off, and hence constitute a low risk of triggering slope stability, will not be captured by the rule.

459. I consider that REr.75N (earthworks) could also be less restrictive as it currently captures small landscaping works that are unlikely to significantly affect slope instability. This is discussed in the evidence of Mr Chamberose at paragraph 5.37. Mr Chamberose suggests retaining the 0.6m cut height and associated 20m3 as currently shown in rule REr.75N but also including an alternative of a lesser volume of 3m3 with a larger cut height of 1.2m to provide flexibility, both having a lower risk of affecting slope stability. Mr Chamberose recommends retaining the overall spread of earthworks at 10m2. I agree that adding the alternative option of a larger cut will provide some relief to submitters while still managing the effects of earthworks in Area 3. Consequential changes will be required to the explanation to REr75N.5.

460. However, in respect to Slope Instability Area 2, these are more discrete areas with potential elevated susceptibility to slope instability including abandoned sea cliffs, the Marsden Coal Measure deposits, the Bishopdale conglomerate and the Grampians areas. On these geologic units I consider it more appropriate to retain all the rules proposed (with some amendments as discussed below). Mr Chamberose discusses the slope instability rules in his evidence and agrees with this conclusion that the rules in Area 2 will appropriately manage potential slope instability causing activities.[25]

461. With respect to REr75G (stormwater and wastewater) and REr.75H (earthworks) in Slope Instability Area 2, a similar amendment is recommended in terms of the roof and hardstand areas and the alternative cut and fill arrangement. These changes are shown below.

462. I have also considered the submissions which seek a certification process or exemptions from the rules for developments which have already gone through subdivision engineering approval process and have site specific geotechnical assessments and conditions and potentially consent notices as part of the subdivision consent process. There are practical difficulties with certification processes and it is important that such rules do not end up providing third party approvals to processes which are the responsibility of the Council. I therefore consider that a stream lined resource consent process for sites which have already undergone substantial geotechnical assessment and have up to date geotechnical reports available could be implemented in respect to the land use rules. I have yet to discuss this fully with the Resource Consent Team, but options include providing a controlled activity pathway for sites with geotechnical assessments less than 5 years old at time of application, coupled with a streamlined consenting process on a preprepared streamlined consenting template and potentially a reduced processing fee (set amount). I will provide further details of this proposal during the hearing process and expert conferencing. Accordingly, I recommend that the submission point of Damien Taylor [S519.001] and the submission points listed as footnotes below[26] be accepted in part.

463. The further submissions to the above submissions have my recommendation recorded in Appendix 1.

---

[25] Evidence of Dan Chamberose at paragraph 5.34

[26] S755.007, S768.011, S767.013, S766.012, S845.048, S768.012, S767.014, S766.014, S755.023, S845.049, S768.013, S767.015, S766.015, 755.024, S845.050, S768.014, S767.016, S766.016, S755.025, S845.051.

464. Nelson North Limited, Suffolk Heights Limited, Bayview Nelson Limited, 588 Limited sought the deletion of subdivision rules REr.112B (Slope Instability Area 2) and REr.112C (Slope Instability area 3), while Megan Courtney sought that subdivision be a controlled activity in Slope Instability Area 3 [S517.001] and should not capture unit title development subdivision occurring within an existing building [S517.008]. I do not support the deletion of these rules, or reducing subdivision activity status to a controlled activity in these areas. In natural hazard areas I consider it appropriate for the Council to be able to decline an application if the mitigation proposed is not appropriate, or the site is not suitable for the activities proposed. I recommend that the submission points of Nelson North Limited [S755.011, S755,036], Suffolk Heights Limited [S768.025, S768.026], Bayview Nelson Limited [S767.030, S767.031], 588 Limited [S766.030, S766.031] and Megan Courtney [S517.001] are rejected.

465. The further submissions [FS73.100, FS73.101] opposing the submissions of Bayview Nelson Limited [S767.030, S767.031] are recommended to be accepted.

466. In respect to the submission point of Megan Courtney [S517.008], I note that PC29 does not change the existing situation in the operative plan in respect to subdivision in slope instability areas. Overall, I recommend that this submission point is rejected.

467. Toka Tū Ake EQC [S203.087] seeks that REr.112D relating to subdivision in the Debris Run-out Area be retained. I recommend that this submission point is accepted.

468. The further submissions opposing the submission of Toka Tū Ake EQC [S203.087] are recommended to be rejected and are recorded in Appendix 1.

469. Overall, since I agree that some changes to the rules are required, I recommend that the submission points listed below[27] are accepted in part. The submission point of Toka Tū Ake EQC [S203.049] is recommended to be rejected, given that Rule REr.75O is not being recommended to be retained. However, the following submission points from Toka Tū Ake EQC [S203.036, S203 .039, S203.040 S203.043 S203.046, S203.065] can be recommended to be accepted.

470. My recommendations on the further submissions to the above submission points are in Appendix 1.

471. In respect to the submissions from Transpower New Zealand Limited [S198.043, S198.044, S198.045] to amend the cross references to the assessment criteria and explanations for REr.75M.4, REr.75N.4 and REr.75O.4, I agree that the references to REr.75N and REr.75O are incorrect. However, I do not consider the cross reference to REr.75M is incorrect. Further, elsewhere in this evaluation I recommend deleting REr.75O so no correction will be needed to the cross reference in that rule. I identify below the remaining amendment required to the cross references to REr.75N below. Accordingly, I recommend that Transpower New Zealand Limited [S198.044] are accepted and S198.043 and S198.045 are rejected.

[27] S755.007, S768.011, S767.013, S766.012, S845.048, S768.012, S767.014, S766.014, S755.023, S845.049, S768.013, S767.015, S766.015, S755.024, S845.050, S768.014, S767.016, S766.016, S755.025, S845.051, S768.015, S767.01, S766.017, S755.026, S845.052, S768.016, S767.018, S766.018, S755.033, S845.053,S755.008, S768.017, S767.019, S766.019, S845.054, S768.018, S767.020, S766.020, S755.018, S845.055, S768.019, S767.021, S766.021, S755.019, S845.056, S768.020, S767.022, S766.022, 755.020, S845.057, S768.021, S767.023, S766.023, S755.021, S845.058, S768.022, S767.024, S766.024, S755.022

472. Toka Tū Ake EQC [S203.037, S203.041, S203.044, S203.047, S203.060, S203.027, S203.029, S203.033, S203.035, S203.042, S203.045, S203.048, S203.061, S203.062, S203.063, S203.064 S203.066, S203.067, S203.088, S203.031, S203.033, S203.038, S203.089, S203.084, S203.085, S203.086, S203.083, S203.082, S203.081, S203.080, S203.079] seeks to retain all Slope Instability Area overlay rules the Inner City Zone and Suburban Commercial Zone. Since I recommend retaining most of these rules, I recommend that these submissions be accepted but that Toka Tū Ake EQC [S203.058, S203.057, S203.055, S203.054, S203.052, S203.051] are rejected.

473. I consider it may be appropriate to utilise the further submissions in opposition to the above Toka Tū Ake EQC submissions in respect to the Inner City and Suburban Commercial Zones to achieve some consistency with the Slope Instability Area 3 proposed deletions and amendments I recommend for the Residential Zone. My recommendations on the further submissions to the above submission points of Toka Tū Ake EQC are in Appendix 1. There do not appear to be similar further submissions for the Industrial Chapter, so in my opinion any consistency will have to be achieved through a variation or future plan change.

10.4.4 Recommendations

474. In summary, in respect to the slope instability and debris-run-out hazard rules and definitions, I recommend the following amendments and deletions:

Provision(s)	Officer recommendations
General	**Add a**fter REr10, ICr10, SCr10 and INr10 a new clause as follows: The natural hazard rules in this plan do not apply to 'regulated activities' controlled under the NESTF.
Slope Instability Area 3 REr.75O-Structures REr.75P-New Residential Units REr.75Q-Additions to existing residential units REr.75R-Accessory buildings	Slope Instability Area 3 **Delete** entirety of rules REr.75O, REr.75P, REr.75Q, REr.75R. **Amend** REr.75M and REr.75N as follows:

Provision(s)	Officer recommendations
	REr.75M **Slope Instability Area 3 Overlay** Stormwater and wastewater	In the Slope Instability Area 3 Overlay: a. discharge of stormwater from any roof, impermeable area or water storage area (including any swimming pool) greater than 10m^2 is a permitted activity, provided it is piped into an approved stormwater system. b. …
	REr.75N **Slope Instability Area 3 Overlay** Earthworks	REr.75N.1 In the Slope Instability Area 3 Overlay earthworks are a permitted activity provided: a. any cut does not exceed 0.6m in height; and b. on any site the placement of fill does not exceed 20m3 in total volume, and is spread over a minimum area of 10m2. Or c. any cut does not exceed 1.2m in height; and d. on any site the placement of fill does not exceed 3m^3 in total volume, and is spread over a minimum area of 10m^2.
	And make consequential changes to the explanation associated REr75M.5 as shown in the consolidated S42A version of PC29 available on the Hearing website (Chapter 7 Residential Rules). Note: I consider it is appropriate to make similar changes to the Suburban Commercial Zone and

<table>
<tr><th>Provision(s)</th><th>Officer recommendations</th></tr>
<tr><td></td><td>Inner City Zone on the basis of the further submissions which oppose retention of those rules.</td></tr>
<tr><td>REr.75N</td><td>Amend the cross references to the assessment criteria and explanation as follows:

REr.75N.4
<table><tr><th><u>Assessment Criteria</u></th><th><u>Explanation</u></th></tr><tr><td><u>REr.75N.4
Refer to REr.75~~J~~M.4.</u></td><td><u>REr.75N.5
Refer to REr.75~~J~~M.5.</u></td></tr></table></td></tr>
<tr><td>Slope Instability Areas 2 & 3</td><td>Amend the land use rules in Slope Instability Areas 2 and 3 to include a controlled activity pathway for sites with geotechnical assessments less than 5 years old at time of application.</td></tr>
</table>

10.4.5 Section 32AA further evaluation

475. As I recommend changes to the slope instability area rules above further evaluation is required under s32AA. As indicated in the evaluation there are costs and benefits associated with introducing new rules to address slope instability hazards. In this instance I have considered those costs and benefits alongside the effectiveness and efficiency of the rules themselves in achieving the objective DO2.2. It is my opinion that the amendments are more appropriate than the notified versions in achieving DO2.2.

476. The proposed changes will reduce the administration costs and costs to property owners of requiring additional resource consents over a wide area of Nelson covered by Slope Instability Area 3, but still enable the risks associated with natural hazards to people, property and infrastructure in Whakatū Nelson to be recognised and managed. The retention of the rules for Slope Instability Area 1 and Slope Instability Area 2 and amended provisions for Slope Instability Area 3 will provide greater flexibility to land owners and therefore will be more efficient, but also ensure significant risks are avoided as sought by objective DO2.2.

10.5 The robustness of the slope instability and debris run-out hazard mapping/overlays

10.5.1 Notified PC29 – Slope instability and debris run-out overlays

477. The notified plan change contains 4 slope instability overlays as follows:

a) Slope Instability Area 1 Overlay;

b) Slope instability Area 2 Overlay;

c) Slope instability Area 3 Overlay; and

d) Debris Run-out area.

478. Areas of potential slope instability and associated run-out zones were identified in ArcGIS from a detailed review of geospatial data sets and is described in more detail in Section 5 of the evidence of Dan Chamberose. Three tiers of slope instability susceptibility and a debris run-out overlay were identified. These layers, as outlined in the technical report by Beca[28] (the Beca report) were translated into map overlays for the purposes of PC29. The natural hazard overlays are explained in more detail in the s32 Evaluation (page 69), with a detailed description of Slope Instability Overlays (1-3) and the Debris Run-out Overlay at page 72 of the s32.

479. The methodology tree for these four overlays is contained in the evidence of Dan Chamberose at paragraph 5.9. The identification of land potentially susceptible to slope instability generally followed the AGS (2007a) guidelines which identify the following settings as potentially susceptible:

a) Cliffs;

b) Natural slopes steeper than 35°(rapid landslides may occur);

c) Natural slopes 20-35° (landslide travel possible);

d) Slopes degraded by recent logging, forest fires, and/or road construction;

e) Slopes where geologic and geomorphic conditions are such that sliding is possible;

f) Slope with a history of instability, including large currently inactive landslides subject to undercutting of the toe or re-activation by development[29].

480. Other factors affecting susceptibility of a slope to instability include rock type, soil type, thickness, watershed size, and/or vegetation and triggers include rainfall, earthquakes, physical/chemical weathering, and land development.

481. Mr Chamberose identifies the hierarchy within the Slope instability areas in section 5 of his evidence. This identified hierarchy is summarised in the table below, with the corresponding naming of the overlays in PC29:

[28] Beca, 2021a. NCC Slope Instability Overlay Report, Report prepared for Nelson City Council by Beca Limited, Christchurch, New Zealand. Revision 3, dated 9 December 2021.

[29] NCC Slope Instability Report, prepared for Nelson City Council by Beca Limited, 9 December 2021, page 4

Beca Report Hierarchy[30]	Beca Report Description[31]	Natural Hazard Overlay in PC29
Tier I	Area of known active instability with previous slope failures impacting residential properties. Included in the Operative NRMP as Tāhunanui Slump Slope Risk Overlay.	Slope Instability Area 1
Tier II	Areas identified as having elevated susceptibility to slope instability including areas with existing deep seated or earthflow instabilities, old over steepened sea cliffs and/or geologic units known to have an elevated susceptibility to instability. A portion of this being the Grampians Slope Risk Overlay in the operative NRMP.	Slope Instability Area 2
Tier III	Areas identified as potentially susceptible to slope instability, generally > 35 degrees slope and based on the geologic and geomorphic setting and/or slopes between 20 degrees and 35 degrees with previous records of slope instability failure. No similar layer identified in the operative NRMP.	Slope Instability Area 3
Run-out Zone	Areas outside of Slope Instability Areas 1, 2 and 3, which previously, or have potential, to be impacted by	Debris Run-out Area

[30] Beca, 2021a. NCC Slope Instability Overlay Report, Report prepared for Nelson City Council by Beca Limited, Christchurch, New Zealand. Revision 3, dated 9 December 2021.

[31] Beca, 2021a. NCC Slope Instability Overlay Report, Report prepared for Nelson City Council by Beca Limited, Christchurch, New Zealand. Revision 3, dated 9 December 2021.

Beca Report Hierarchy[30]	Beca Report Description[31]	Natural Hazard Overlay in PC29
	instability run-out from areas upslope. No similar layer identified in the operative NRMP.	

482. The Beca report was updated following the severe weather events of August 2022[32] resulting in some minor changes to the overlays (s32 Report, page 72).

10.5.2 Submissions

483. Submissions concerning the Slope Instability Overlays including Debris Run-out generally include the following matters:

a) Submitters who considered the slope instability overlays are inaccurate, including being not up to date; and do not take into consideration site specific geotechnical assessments already prepared, or mitigation works undertaken, and should be removed or amended.

b) Submitters who considered that their property was unaffected by recent events so should not be identified in a slope instability overlay.

c) Submitters who requested a change to the map scale of the geotechnical hazard layers so you can actually see where they lie on the property.

d) Submitters who considered the Slope Instability Area 3 identifies areas of lower risk than the other slope instability areas and should be renamed.

484. Nelson Tasman Climate Forum [S512.019] support the increased area covered by the slope instability overlays.

485. Eliot Sinclair and Partners Limited [S75.011], Megan Courtney [S517.013] request changes to the map scale so that it is possible to more clearly see where the overlay lies on each property. Nelson City Council [S947.011] requests a review of the fault hazard, liquefaction, slope instability and debris run-out overlays and associated provisions to ensure that it is clear when and how a property is affected by the rule associated with fault hazard, liquefaction, slope instability and debris run-out overlay. This latter submission is essentially about the same matter in respect to the scale of the mapping.

486. The submission of Nelson City Council [S947.011] received one further submission [FS57.011] in partial support.

[32] NCC Slope Instability Overlay - Post August 2022 Severe Weather Event Review, prepared for Nelson City Council, BECA, 3 May 2023.

487. A number of submitters[33] request that the slope instability hazard mapping for 'Tāhunanui Hills' be refined. This has been discussed earlier in respect to general slope instability hazard issues.

488. The submission of Pip Swale [S481.014] received three further submissions [FS61.092, FS72.096, FS60.088] in support.

489. Megan Courtney [S517.007] seeks removal of sites with a minor Slope Instability Area 3 coverage from the overlay.

490. North Nelson Limited [S755.003], Suffolk Heights Limited [S768.004], Bayview Nelson Limited [S767.004], 588 Limited [S766.004] and GP Investments Limited [S845.004] requested that the risks associated with land in Slope Instability Area 2 be re-assessed and amended as they considered the maps to be inaccurate and did not consider more recent site-specific geotechnical information available. Teresa Keogan [S529.001] made a similar request and considered the mapping should take into account the available geotechnical information NCC currently holds.

491. Further submissions were received in respect to these submissions and are identified in Appendix 1.

492. Several other submitters also considered that their land had already been certified by suitably qualified geotechnical professional and should be removed from Slope Instability Area 2:

a) Lloyd Phillips opposed Slope Instability Area 2 on their property at 17 Stansell Avenue.

b) Damien Taylor [S519.001], Alan West [S321.001] and Barry Chamberlain [S358.001] opposed Slope Instability Area 2 overlay on their respective properties at Andy Whiting Place in Stoke.

c) Cory Robertson [S144.001] requested that the property at 80 Bay View Road be removed from any land slip hazard mapping.

493. The submissions of Damien Taylor [S519.001], Alan West [S321.001] and Cory Robertson [S144.001] each received five further submissions in support. The submission of Barry Chamberlain [S358.001] received one further submission [FS49.009] in support.

494. North Nelson Limited [S755.004, S755.014], Suffolk Heights Limited [S768.006, S768.005], Bayview Nelson Limited [S767.006, S767.005}, 588 Limited [S766.006,766.005] and GP Investments Limited [S845.007, S845.006], also requested that Slope instability Area 3 be removed from the overlay definitions and Slope Instability Area 3 Overlay be removed. In the alternate these submitters requested that the risks associated with all land within this overlay be re-assessed and the boundaries be amended accordingly with reference to site specific information. Similarly, Gavin Scandlyn [S594.002] seeks the removal of slope instability Area 3 layer from areas subject to recent investigation and more detailed than research used to provide Area 3.

495. Several further submission points were received to the submissions in the paragraph above and are identified in Appendix 1.

496. Submitters Rebecca and Stefan Beaumont [S840.001, S840.002, S840.003] in reference to their property at Cleveland Terrace also considered that the slope instability overlays do not accurately

[33] S754.042, S312.013, S781.013, S893.013, S481.014, S546.029

reflect the reality of the local conditions following the recent August 2022 extreme rainfall event. There being no slips or instability present, and no debris runout on neighbouring properties. Rosemary Horn [S464.009] similarly, in respect to Nile Street and Cleveland Terrace, considered that given that there was no evidence of significant slips on their property or neighbours during this event that the risk category is not accurate. Given this, these submitters consider that it was not appropriate to include their property in the slope instability overlays.

497. Bill Harrington [S582.001], Gavin Scandyn [S594.001] seek that Slope Instability Area 3 be renamed to "Low risk Slope Instability Area", "Slope Management Area", or "Slope Assessment Area" or similar, to recognise that it is an area of lower risk, compared with Slope Instability Areas 2 and 3. Another submitter requests that Slope Instability Areas 1 and 2 be renamed high and medium risk respectively[34].

498. Further submissions were received on these submissions and are contained in Appendix 1.

10.5.3 Evaluation

499. Mr Chamberose covers the issue of the accuracy of the slope instability overlays in his evidence. I agree with his assessment.

500. In particular, I agree that whether a site has been affected by slope instability during past trigger events (such as the August 2022 event) does not directly correlate with behaviour in future trigger events. Earthquakes, for instance, will have a different pattern of slippage from rainfall events. The intensity of rainfall events, local conditions and the direction the event come from all influence which slopes will be affected. Likewise in an earthquake, the magnitude of the event, proximity to fault lines and geologic units will have considerable influence on the impact on hillsides (see section 5 of Mr Chamberose evidence). Consequently, I agree with Mr Chamberose that it is not appropriate to remove areas from the slope instability overlays just because they were not affected by the August 2022 events.

501. Submitters raise an important issue of whether the maps should be amended to include more up to date information where that information is available now. I agree where that information would change the assessment of the area under the methodology and decision tree explained in the evidence of Mr Chamberose, then it could inform changes to the overlays during this process.

502. However, the updated information would have to be put through the same methodology, at the same scale, and confirm that the characteristics of the land had changed (such as land modification that has lowered/steepened the slope angle as per Mr Chamberose evidence), which points to changes in potential slope instability. Updated LiDAR would form part of that revision, and would confirm extensive recontouring site works where they had occurred.

503. Going back to the purpose of the slope instability overlays and the methodology and scale that they are prepared, site specific data may not change the outcome. The land may still fall to be considered within the layers identified in the Beca Report. A discussed by Mr Chamberose this is because site specific instability issues are identified at a site at the time the assessment is completed, and normally address a specific building or activity proposal. It may not address the whole site, a different building platform on the site, or recent slope activity as a result of natural hazard events or land use.

[34] Megan Courtney [S517.013]

504. While it may not be appropriate to remove sites that have undergone geotechnical certification from the overlays it may be more appropriate to find an alternative path through the provisions that acknowledges the work completed and reduces the resource consenting burden. Some submitters have sought exemptions from the rules in these circumstances and I address that under the rules section.

505. In respect to the submission by Megan Courtney [S517.007] to remove sites with only a minor Slope Instability Area 3 coverage from the overlay, I note that the overlay rules only apply in the part of the property covered by the overlay. This means that the remainder of the site can be developed without need for additional assessment under the slope instability provisions. I have taken the submission point as a general request. The submitter may wish to provide more information on their specific property if only a very small part is included in the overlay.

506. Overall, I accept the evidence of Mr Chamberose that it is not appropriate to amend any of the slope instability overlays, remove small parts of the overlay from properties, or remove any properties altogether from it (see evidence of Mr Chamberose at Section 5). Consequently, I recommend that the submission points of : Jan Jordan [S754.042], Diane Rose [S312.013], Michael Rose (Rose Family Trust) [S781.013], Lilia and Eugen Grab [S893.013], Pip Swale [S481.014], Michelle Collier [S546.029], Cory Robertson [S144.001], Barry Chamberlain [S358.001], Damien Taylor [S519.001], Alan West [S321.001], Lloyd Philips [S307.001], Teresa Keogan [S529.001], North Nelson Limited [S755.003,S755.014, S755.004], Suffolk Heights Limited [S768.004, S768.005, S768.006], Bayview Nelson Limited [S767.004, S767.005, S767.006], 588 Limited [S766.004, S766.005, S766.006], GP Investments Limited [S845.004, S845.006, S845.007], Rosemary Horn [S464.009], Rebecca and Stefan Beaumont [840.001, S840.002, S840.003], Gavin Scandlyn [S594.002], Megan Courtney [S517.007] be rejected.

507. The support of Nelson Tasman Climate Forum [S512.019] for the slope instability overlays is recommended to be accepted.

508. My recommendations on the further submissions to the above submission points are in Appendix 1.

Scale of Slope Instability Overlays

509. I agree with Eliot Sinclair and Partners Limited [S75.011] and Megan Courtney [S517.013] and Nelson City Council [S947.011] that the representation of the slope instability mapping (and the fault deformation overlay and fault awareness overlay) should not disappear ('locked limit' to the zoom-in capability) on the planning maps when the scale is moved below 1:5000. After viewing the maps and seeking advice from BECA in respect to the mapping it provided for the E-plan, I recommend amending the scale slide on the E-planning maps so that property owners can more clearly zoom in to the hazard overlay lines affecting their properties.

510. Mr Chamberose discusses this issue of scale in his evidence at page 16 and agrees that the electronic map should be modified to allow the overlays to be easily viewed at individual property level. I agree and also recommended that the amended planning maps contain a note to users outlining the limitation of using these maps beyond a scale of 1:5000. It should also be clear that the maps are purely as a trigger to the rule provisions which indicate site specific geotechnical information will be required to identify the nature of any slope instability and mitigation required for future development of the site. Beca agree to the electronic map being amended accordingly to allow zooming in to the property level, with additional words added to make the limitations of

the overlay boundaries clear to users. Overall, I recommend that the submission points of Eliot Sinclair and Partners Limited [S75.011] and Megan Courtney [S517.013] are accepted in part and that Nelson City Council [S947.011] is accepted in part as I am not recommending a review of the layers themselves.

511. My recommendations on the further submissions to the above submission points are in Appendix 1.

Rename Slope Instability Areas to acknowledge level of risk

512. A number of submitters seek the renaming of the Slope instability Areas to reflect the risk. Mr Chamberose outlines in his evidence that the Beca Report is not a risk assessment but recognises various levels of susceptibility. In particular Mr Chamberose states at page 9 of his evidence:

"They are not risk zoning overlays as described in AGS, 2007a guidance. Risk zoning overlay assessments require additional considerations, including likelihood of slope failure and the potential consequences to a particular element at risk which was outside the scope of work and not the intent of the slope overlays."

513. The hierarchy of slope instability susceptibility areas in the Beca Report is articulated in PC29 at Section AD11.3.1, and in the greater or lesser restrictions in the respective overlays included in the policies and rules. However, this is less well articulated in the map legend and overlay naming itself and this has caused some issues for property owners. While the naming adopted is a common way of expressing slope instability layers in many plans around the country and the concern expressed is partly an issue that often arises with new provisions, I agree that it would be appropriate to introduce some clearer naming that better distinguishes these overlays. I do not consider it appropriate to translate the work prepared by Beca into low, medium/moderate or high-risk areas as that is not supported by the work completed to date and would be inconsistent with the AGS guideline used in the methodology. However, I do consider it appropriate to introduce the word 'susceptibility' to all of the layers and to recognise the well-known susceptibility to instability of the Tāhunanui Slump (Area 1), and the 'elevated' susceptibility to instability of Area 2. In terms of recognition that Slope Instability Area 3 as a more general layer for potential instability in the steeper hill areas I recommend that it be renamed Slope Instability Susceptibility Area 3 (General Hills).

514. Overall, I recommend that the submission points of Bill Harrington [S582.001] and Gavin Scandyn [S594.001] in respect to the renaming of Slope Instability 3, be accepted in part, while the submission of Megan Courtney [S517.013] also be accepted in part to the extent that I am recommending some changes to the names of Slope Instability Areas.

515. My recommendations on the further submissions to the above submission points are in Appendix 1.

10.5.4 Recommendations

516. I recommend no amendments to the slope instability and debris run-out overlay mapping. However, some relief to submitters located in these areas may be provided by my recommended amendments to the slope instability provisions discussed earlier. I recommend the following changes to the naming of the overlays:

Provision(s)	Officer recommendations
Slope Instability Area Overlays	Amend the slope instability area overlays naming throughout PC29 and map legend as follows: Slope instability Area 1 –Slope Instability Susceptibility Area 1 (Tāhunanui Slump) Slope instability Area 2– Slope Instability Susceptibility Area 2 (Elevated) Slope instability Area 3–Slope Instability Susceptibility Area 3 (General Hills) Debris Run-out Area – Debris Run-out Susceptibility Area
Electronic mapping	Amend the electronic mapping of the slope instability and fault overlays so that they can be viewed at the property level (undo the locked limit on the map viewer). Add words to the map legend to indicate the limitation of using these maps beyond a scale of 1:5000.

10.5.5 Section 32AA further evaluation

517. As I recommend changes to the names of the slope instability area overlays and changes to the map viewer further evaluation is required under s32AA. The changes to the names of the slope instability areas are, in my view, relatively minor and are principally to more clearly and appropriately describe the proposed slope instability categories developed in the Beca Report as discussed in the evidence of Mr Chamberose. I consider the changes to be more appropriate in achieving the purpose of the RMA and objective DO2.2 than the notified plan.

518. The changes to the map viewer suggested in the discussion above are also largely to improve the clarity of the plan and assist in its usability. I consider the changes to be more appropriate than the notified plan. I consider with appropriate wording on the map legend users will understand the limited purpose of the overlay as a trigger to the rules. A flexible map viewer will enable greater identification of the natural hazard identified on property, providing greater certainty and better gives effect to Objective DO2.2.

11.0 Consideration of submissions and further submissions– Liquefaction

11.1 Overview of submissions received

519. Given the variety of submissions received in respect to liquefaction, this report focusses on the key themes raised. Having reviewed the submissions in detail, the following are what I consider to be the key matters in contention for this topic, and I therefore focus my analysis on these matters:

a) The appropriateness of the liquefaction policies,

b) The appropriateness of the liquefaction rules.

520. These key themes form the basis of my assessment below. For ease of reading, this report uses references to submission numbers sparingly and groups key submission points by themes.

521. My recommendations in relation to all submission points on this topic are included at Appendix 1. Where a submission is not directly referenced in this report, it is otherwise addressed in Appendix 1.

11.2 The appropriateness of the liquefaction hazard policies

11.2.1 Notified PC29 – Policies DO2.2.14 and DO2.2.15

522. This section discusses the two liquefaction hazard policies DO2.2.14 and DO2.2.15 included in the notified PC29.

523. DO2.2.14 relates specifically to the Liquefaction Hazard Overlay, while DO 2.2.15 is a policy relating to previously assessed sites and low risk activities.

524. DO2.2.14 liquefaction hazard: subdivision, use and development.

525. Control subdivision, use and development within the Liquefaction Hazard Overlay to ensure that:

a) the proposed subdivision, use or development anticipated for the site is suitable;

b) the location, size, design and layout of the subdivision, use or development in relation to the liquefaction risk is appropriate;

c) the level of risk to people, property and infrastructure from the liquefaction hazard is acceptable; and

d) that site-specific geotechnical assessment and proposed mitigation measures identify and adequately address the level of risk from liquefaction hazard before subdivision, use or development takes place.

526. DO2.2.15 liquefaction hazard: previously assessed and low risk activities.

527. Provide for activities within the Liquefaction Hazard Overlay where the proposed activity:

a) is on a lot created by a subdivision for which the application included a site- specific liquefaction assessment and was granted resource consent after 889.008 November 2021; and

b) incorporates mitigation measures recommended in the site-specific assessment; or

c) is a small scale and non-habitable building where the risk to people, property and infrastructure is low.

11.2.2 Submissions

528. Submissions concerning the liquefaction policies include the following matters:

a) Support for the provisions to be retained;

b) Provide for prohibition of underground storage tanks;

c) Alternative wording to include well-being;

d) Make provision for nationally and regionally significant infrastructure;

e) Remove references to 'acceptable' and 'appropriate'.

529. Nelson Airport [478.009] requests that Policy DO2.2.14 be amended to add a new clause that states:

nationally and/or regionally significant infrastructure can continue to function efficiently and effectively without unreasonable constraint.

530. In addition, Toka Tū Ake EQC [FS73.014] opposed the request of Nelson Airport [478.009], as they consider the wording 'unreasonable constraint' is ambiguous and could cause confusion and inconsistent application of the rules. Toka Tū Ake EQC also expressed concern that Nelson Airport has a need for post event functionality and needs to ensure its resilience as significant infrastructure, which may include mitigation of risks associated with its location.

531. The submission of Nelson Airport [S 478.009] received three further submissions [FS51.009, FS73.014, FS83.106] in opposition.

532. BP Oil NZ Ltd, Mobil Oil NZ Ltd, and Z Energy Ltd [S257.002], Transpower New Zealand Limited [198.023] and Te Whatu Ora [S709.031] request that Policy DO2.2.14 be retained as notified.

533. Te Whatu Ora [S709.014] requests wording be added to the policy about risks to health and well-being, while Zero Carbon Nelson Tasman [S324.024] seek a prohibition for underground storage tanks in the policy.

534. The submission of Te Whatu Ora [S709.014] received one further submission [FS73.046] in support. The submission of Zero Carbon Nelson Tasman [S324.024] received two further submissions [FS25.012, FS42.004] in opposition.

535. Toka Tū Ake EQC [S203.012] requests that in reference to this policy a definition of the level of risk deemed 'acceptable' and the level of risk mitigation deemed 'appropriate' should be included or the words removed from the policy.

536. The submission of Toka Tū Ake EQC [S203.012] received one submission [FS25.002] in partial support and six submissions[35] in opposition.

537. In terms of the explanation to the policy Te Whatu Ora [S709.032] seek to amend DO2.2.14i so that it reads:

> Whilst liquefaction is primarily a risk to the built environment rather than to people, it still has the potential to cause health effects to residents and those cleaning the contaminated environment.

538. In terms of Policy DO2.2.15 BP Oil NZ Ltd, Mobil Oil NZ Ltd, and Z Energy Ltd [S257.003] and Te Whatu Ora [S709.033] request that Policy DO2.2.15 be retained as notified.

11.2.3 Evaluation

539. Nelson Airport has been recommended in another report to be included in the definition of regionally significant infrastructure and while I support that, I don't consider the above amendment to Policy DO2.2.14 appropriate. I agree with Toka Tū Ake EQC further submission [FS73.014] that the airport will be required to build resilient infrastructure and the words 'without unreasonable constraint' provide an ambiguous and potentially inappropriate policy direction in the identified liquefaction hazard areas.

540. Te Whatu Ora [S709.032 S709.014] suggest amendments to Policy DO2.2.14 to insert words about health and well-being, and to add similar words to the explanation. However, these words are not most appropriately placed in this policy and explanation, as there are no methods in the plan that specifically implement them, or at least, in my view if included in the policy would not require a land use response beyond what is already contained in the policy and explanation. Similarly, in respect to the submission point by Zero Carbon Nelson Tasman [S324.024], it is not appropriate, in my opinion, to add words in respect to prohibiting underground storage tanks to Policy DO2.2.14.

541. A similar request to Toka Tū Ake EQC [S203.012] was addressed in the evaluation section of the slope instability policies for submission point Toka Tū Ake EQC [S203.014] where I discuss the use of words such as 'acceptable' and appropriate in a policy context. My comments on that submission point apply equally here.

542. Overall, in respect to the submission points on DO2.2.14 I recommend that Nelson Airport [478.009], Te Whatu Ora [S709.014, S709.032], Toka Tū Ake EQC [S203.012] and Zero Carbon Nelson Tasman [S324.024] be rejected at this stage. I also recommend that the submission points of BP Oil NZ Ltd, Mobil Oil NZ Ltd, and Z Energy Ltd [S257.002], Transpower New Zealand Limited [198.023] and Te Whatu Ora [S709.033] are accepted in that I recommend that the policy remain unchanged. The further submission of Toka Tū Ake EQC [FS73.014] is also recommended to be accepted for the same reason.

543. My recommendations on the further submissions to the above submission points are provided in Appendix 1.

[35] FS56.009, FS41.01, FS43.019, FS44.019, FS45.019, FS49.024

11.2.4 Recommendations

544. In summary, in respect to the liquefaction hazard policies, I recommend no amendments. However, as a result of evaluating submissions on the rules there may need to be consequential changes to these policies which I discuss in the next section.

11.2.5 Section 32AA further evaluation

545. As no changes are recommended to PC29 as a result of these submissions no further evaluation is required under s32AA.

11.3 The appropriateness of the liquefaction hazard rules

11.3.1 Notified PC29 Liquefaction Hazard Rules

546. This section discusses the liquefaction hazard rules and associated definitions included in notified PC29.

547. As identified in the s32 Report at page 81-82 the rules associated with the Liquefaction Hazard overlay are included in Chapter 7 Residential Zone, Chapter 8 Inner City Zone, Chapter 9 Suburban Commercial Zone and Chapter 10 Industrial Zone. A summary of the provisions is provided in the s32 at page 81-82 which I will not repeat here. The rules in the respective zones are as follows:

a) Residential Zone rules- REr.74A and REr.110B;

b) Inner City Zone rules – ICr.71P and ICr.88;

c) Suburban Commercial Zone - SCr.70V and SCr.74;

d) Industrial Zone rules - INr.72A and INr.76.

548. The Liquefaction Overlay rules address buildings and network utilities and subdivision.

549. There are no liquefaction hazard specific definitions in the notified PC29.

11.3.2 Submissions

550. Submissions concerning the liquefaction rules include the following matters:

a) Support for the provisions to be retained;

b) An exemption for telecommunication network utilities;

c) An exemption for nationally and regionally significant infrastructure (Nelson Airport);

d) Amendment to add non-notification clause to REr.

551. Connexa [S487.010], Chorus New Zealand Limited [S486.010], Aotearoa Tower Group Limited S487.010 (trading as FortySouth [S488.010], One New Zealand Limited [S490.010], Spark New Zealand Trading Limited S491.010] request that a note be added to rule REr.74A.1 to state that REr.74A does not apply to telecommunication network utilities.

552. The submissions of Connexa [S487.010], Chorus New Zealand Limited [S486.010], Aotearoa Tower Group Limited (trading as FortySouth) [S488.010], One New Zealand Limited [S490.010] and Spark New Zealand Trading Limited [S491.010] each received one further submission in partial support.

553. Te Whatu Ora [S709.088] requests that an amendment to add 'people' assessment criteria clause c of Rule REr.74A.4. While Manuka Stret Hospital [S881.025] requests the addition of a non-notification clause to REr74A.

554. The submission of Te Whatu Ora [S709.088] received one further submission [FS73.054] in support.

555. Toka Tū Ake EQC [S203.023, S204.024, S203.025] supports rules REr74A, ICr.71P and rule SCr.70V (building and network utilities in the Liquefaction Overlay). Transpower New Zealand Limited [S198.042] seek that rule REr74A be retained as notified. Similarly, BP Oil NZ Ltd, Mobil Oil NZ Ltd, and Z Energy Ltd [S257.014] support ICr.71P and seek that it be retained as notified.

556. The submissions of Toka Tū Ake EQC [S203.023, S204.024, S203.025] each received six further submissions[36] in opposition.

557. Kainga Ora [S933.111] request amendments to rule INr.72A (building and network utilities in the Liquefaction Overlay) to a controlled activity from restricted discretionary, with matters of control focused on foundation and network utility design. While Nelson Airport Limited [S478.015] seeks specific exemptions or exclusions to Rule INr72A for national and regionally significant infrastructure '*to ensure Nelson Airport can practically advance future works and activities commensurate to its scale and specific functional requirements.*' BP Oil NZ Ltd, Mobil Oil NZ Ltd, and Z Energy Ltd [S257.022] seeks that rule INr.72A be retained as notified.

558. The submission of Kainga Ora [S933.111] received one submission [FS25.041] in support and one submission [FS73.148] in opposition. The submission of Nelson Airport Limited [S478.015] received one submission [FS83.112] in opposition.

559. Kainga Ora [S933.102, S933.112] request that ICr.88 and INr76 (subdivision in liquefaction hazard overlay) be amended from restricted discretionary activity to controlled activity. While Toka Tū Ake EQC [S203.076, S203.077, S203.078] request that REr.110B, SCr.74 and ICr88, all relating to subdivision in the Liquefaction Hazard Overlay, be retained.

560. The submissions of Kainga Ora [S933.102, S933.112] received two further submissions [FS73.146, FS73.149] in opposition and one further submission [FS25.042] in support. The submissions of Toka Tū Ake EQC [S203.076, S203.077, S203.078] each received six submissions[37] in opposition.

11.3.3 Evaluation

561. Connexa [S487.010] et al seek exemption from Rule 74A -buildings and network utilities in the Liquefaction Hazard overlay. This is discussed in earlier sections of this report. I do not support exemptions to the natural hazard rules for telecommunications network utilities, and I refer to my evaluation under section 10 on this matter. I have recommended an amendment to the plan to make it clear that the natural hazard provisions do not apply to activities that fall within the definition of 'regulated activities' under the NESTF. Accordingly, I recommend that Connexa [S487.010], Chorus New Zealand Limited [S486.010], Aotearoa Tower Group Limited S487.010

[36] FS56.010, FS41.029, FS43.030, FS44.029, FS45.030, FS49.035, FS56.011, FS41.030, FS43.031, FS44.030, FS45.031, FS49.036

[37] FS56.016, FS41.085, FS43.083, FS44.081, FS45.084, FS49.089, FS56.017, FS41.086, FS43.084, FS44.082, FS45.085, FS49.108, FS56.018, FS41.087, FS43.085, FS44.083, FS45.086, FS49.090

(trading as FortySouth [S488.010], One New Zealand Limited [S490.010], Spark New Zealand Trading Limited S491.010] be rejected on this matter.

562. My recommendations on the further submissions to the above submission points are in Appendix 1.

563. In respect to the request by Te Whatu Ora [S709.088] to add 'people' to assessment criteria clause c of Rule REr.74A.4 and REr110B.4 I agree that these are helpful additions. The clause will be more consistent with Objective DO2.2 which focuses on risk to Whakatū Nelson's people, property and infrastructure. Accordingly, I recommend that this submission point be accepted.

564. My recommendations on the further submissions to the above submission points are in Appendix 1.

565. The request from Manuka Street Hospital [S881.025] for the addition of a non-notification clause to REr74A, would set it apart from other rules in the natural hazard overlays. That said, many of the consents are likely to be able to be processed on a non-notified basis depending on the specific project and site. I consider it appropriate to leave that decision-making on a case by case basis. Accordingly, I recommend that this submission from Manuka Street Hospital [S881.025] be rejected.

566. Generally, in the foregoing discussion, I have recommended that rule REr.74A is retained as notified. The rules in the inner City and Suburban Commercial Zone are the same and I also recommend that they be retained. Accordingly, I recommend that Toka Tū Ake EQC [S203.023, S204.024, S203.025], Transpower New Zealand Limited [S198.042] and BP Oil NZ Ltd, Mobil Oil NZ Ltd, and Z Energy Ltd [S257.014] be accepted.

567. My recommendations on the further submissions to the above submission points are in Appendix 1.

568. With respect to the request by Kainga Ora [S933.111] to amend rule INr.72A to a controlled activity, I am generally not supportive. This is because I consider it appropriate for resource consent applications under this rule in the Liquefaction Hazard overlay to be able to be declined. In terms of the matters of control suggested, I consider that they are too narrow, and a wider range of matters, which will include foundation design, is appropriate.

569. I have considered the request to amend the activity status of ICr.88 and INr76 (subdivision in the Liquefaction Hazard Overlay) where Kainga Ora [S933.102, S933.112] from restricted discretionary to controlled. Given the nature of liquefaction hazard and the greater checks and balances for subdivision under 106 of the RMA, I agree that this activity status may be appropriate in the Industrial and Inner City Zones. However, the structure of the subdivision rules in these chapters are relatively complicated and will require further discussion with the subdivision consent planners, before I can draft an alternative. Consequently, I will recommend these submission points [S933.102, S933.112] be rejected at the present time and I will reconsider this recommendation once I have had discussions on appropriate rewording with the Councils consent planners. The submission points of Toka Tū Ake EQC [S203.076, S203.077, S203.078] are recommended to be accepted at this time.

570. My recommendations on the further submissions to the above submission points are in Appendix 1.

571. Nelson Airport Limited [S478.015] seeks specific exemptions or exclusions to Rule INr.72A for national and regionally significant infrastructure. Nelson Airport state that the introduction of new rules in the industrial zone provisions have the potential to severely constrain Nelson Airport. I am unsure from this submission point what changes Nelson Airport seek to INr.72A, other than a straight exemption from the rule. The reasons for the submission discuss large scale earthworks required of significant national and regional infrastructure, but I note that this rule is about buildings and network utilities. In addition, given the breadth of the definition of regionally significant infrastructure which is being recommended in another report I am unable to support the amendment sought at the present time. I consider it appropriate for the submitter to advise the specific changes they seek at the hearing so I can reconsider this request in respect to INr.72A. I note that BP Oil NZ Ltd, Mobil Oil NZ Ltd, and Z Energy Ltd [S257.022] seeks that rule INr.72A be retained as notified. Accordingly, I recommend that Kainga Ora [S933.111] and Nelson Airport Limited [S478.015] be rejected, and the submission point from BP Oil NZ Ltd, Mobil Oil NZ Ltd, and Z Energy Ltd [S257.022] be accepted.

572. My recommendations on the further submissions to the above submission points are in Appendix 1.

11.3.4 Recommendations

573. In summary, in respect to the liquefaction hazard rules, I recommend the following amendments:

Provision(s)	Officer recommendations
REr.74A.4	Amend clause c of REr.74A.4 as follows: c. the risk to people, property, infrastructure and the environment posed by liquefaction hazard, considering the nature of the proposed activity.
Rer.110B.4	Amend clause c of REr110B.4 as follows: c. the risk to people, property, infrastructure and the environment posed by liquefaction hazard, considering the nature of the proposed activity.

11.3.5 Section 32AA further evaluation

574. As I recommend changes to REr.74A.4 and Rer.110B.4 a further evaluation is required under s32AA. The changes are more consistent with the wording of Objective DO2.2 and are therefore more appropriate than the notified assessment criteria. In addition, this change provides clarity for plan users of the intent of the provisions to address effects of liquefaction on people (although risk to life is less likely with liquefaction hazard it still has effects on people).

12.0 Consideration of submissions and further submissions – Fault Hazard

12.1 Overview of submissions received

575. A large number of submissions on fault hazard were received, consequently this section of the report focusses on the key themes raised. Having reviewed the submissions in detail, the following are what I consider to be the key matters in contention for this topic, and I therefore focus my analysis on these matters:

a) Fault Hazard – general matters;

b) The appropriateness of the fault hazard policies;

c) The appropriateness of the fault hazard rules, including definitions;

d) The robustness of the fault hazard mapping; and

e) Site specific fault hazard areas.

576. These key themes form the basis of my assessment below. For ease of reading, this report uses references to submission numbers sparingly and groups key submission points by themes.

577. My recommendations in relation to all submission points on this topic are included at Appendix 1. Where a submission is not directly referenced in this report, it is otherwise addressed in Appendix 1.

12.2 Fault hazard - general matters

12.2.1 Notified PC29 - General

578. This section discusses general matters raised in submissions and further submissions in respect to the Fault Deformation and Fault Awareness Overlays.

12.2.2 Submissions

579. The main matters in contention raised by submitters and further submitters in relation to Fault Hazards – general matters are:

a) Oppose increasing heights and density of people in fault overlays;

b) Rezone locations with fault lines to General Residential; and

c) Limit building heights in the Region due to fault lines, flooding and slipping.

580. David Gibson [S741.011, S741.023], Susan Gibson [S783.015] and Michelle McLean [S205.001] The Domett St/Hardy St/Tasman St/Nile St block [S719.018] and Selina Wilkinson [S806.009] variously seek that density and heights are not increased in Fault overlays or that intensification/ multi storey development should be delayed until the Alpine Fault rupture has occurred. Dee Taylor [S579.014] considers that high density in the fault and flood corridors should be deleted. While Jane Bayley [S560.019] seeks to retain existing density and allotment size within Fault Zones.

Laraine Rothenburg [S457.032] requests that areas in locations with earthquake faults should be rezoned to General Residential (including area above Bronte Street) to General Residential. Benjamin Plows-Kolff [S578.007] goes further and states that building on sites known to flood or have faults should not be allowed.

12.2.3 Evaluation

581. These general submission points oppose new building and intensification (including increasing heights) in the Fault Hazard overlays. The purpose of identifying the Fault Deformation and Fault Awareness overlays and associated provisions is to enable assessment of subdivision and development by a geotechnical professional prior to development taking place so that appropriate mitigation such as setbacks and building platforms can be recommended away from the fault line. It is considered that this is the appropriate mechanism in the plan change to meet Objective DO2.2 to recognise and manage risks and avoid significant risk, while still meeting the overall objective of the plan change to increase housing availability and choice in Nelson. Accordingly, I recommend that these submission points[38] be rejected. However, I do note that in another report the High Density Residential zone has been recommended to be deleted. This may provide some relief to this group of submitters.

12.2.4 Recommendations

582. In summary, in respect to fault hazard – general matters, I do not recommend any changes to the Fault Hazard provisions.

12.2.5 Section 32AA further evaluation

583. As no changes are recommended to PC29 as a result of these submissions no further evaluation is required under S32AA.

12.3 The appropriateness of the fault hazard policies

12.3.1 Notified PC29 – Policies 2.2.11, 2.2.12 and 2.2.13

584. This section discusses three fault hazard policies DO2.2.11 to DO2.2.13 included in the notified PC29.

585. DO2.2.11 relates specifically to the Fault Deformation Overlay, DO 2.2.12 relates specifically to the Fault Awareness Area, and DO2.2.13 is a general policy relating to requiring a setback from the fault zone.

586. DO2.2.11 Fault Deformation Overlay: subdivision, use and development

587. Control subdivision, use and development within the Fault Deformation Overlay to ensure that:

a) site-specific geotechnical investigation and assessment is undertaken and the risk to people, property, infrastructure and the natural environment is assessed; and

b) the proposed land use or activity, and anticipated use of the site, is appropriate; and

[38] S741.011, S741.02, S783.01, S205.001, S719.018, S806.009, S579.014, S560.019, S457.032, S578.007.S783.015

c) 3 . the location, size and design of the development, including building platforms, address the potential risks associated with fault deformation.

588. DO2.2.12 Fault Awareness Overlay.

589. Ensure that subdivision, residential buildings and rezonings within the Fault Awareness Overlay is supported by a geotechnical assessment that identifies and assesses the risk from fault deformation, and that identified risk can be appropriately mitigated.

590. DO2.2.13 fault hazard: setback from fault zone

591. Require new buildings and network utilities, and additions to existing buildings and network utilities, within the Fault Deformation Overlay to be appropriately set back from the fault zone (where it can be identified) to mitigate significant risk to people and property from fault rupture and associated ground deformation.

12.3.2 Submissions

592. In respect to Policy DO2.2.11, Zero Carbon Nelson Tasman [S324.021, S324.022] requested that a setback be required from the edge of the overlay for residential development, and also requested a minor error in the numbering of the Explanations and Methods. Te Whatu Ora [S709.030] and Toka Tū Ake EQC [S203.009] support Policy DO2.2.11 (Fault Deformation Overlay policy). Toka Tū Ake EQC [S203.010] sought the retention of DO2.2.12 (Fault Awareness Overlay policy) as notified. These submission points were opposed in further submissions, which are identified in Appendix 1.

593. Transpower New Zealand Limited [S198.021, S198.022] sought amendments to recognise functional and operational needs for some activities to locate within the Fault Deformation Overlay. EQC Toka Tū Ake (FS73.005] opposed this submission point.

594. Zero Carbon Nelson Tasman [S324.023] seek amendments to DO2.2.12 and DO2.2.13 to include that a copy of the geotechnical report paid for by landowners is made available to the Council to add to their knowledge.

12.3.3 Evaluation

595. The purpose of Policy DO2.2.11 is to ensure that appropriate geotechnical assessment of the fault deformation overlay occurs before development takes place. This will usually result in a setback being recommended from the fault trace. Consequently, the policy provides for the outcome that Zero Carbon seeks. I was unable to determine if there were additional words requested by the submitter, and recommend at this point that the wording be retained as notified. I agree with Zero Carbon Nelson Tasman [S324.022] that there is an error in the numbering in PC29 for the explanation and methods. I recommend that this error be corrected as indicated in the table below. Overall, I accept the support of Te Whatu Ora [S709.030] and Toka Tū Ake EQC [S203.009] and also recommend that the submissions of Zero Carbon [S324.021, S324.022] be accepted.

596. In respect to the changes requested by Zero Carbon Nelson Tasman [S324.023] to Policies DO2.2.12 and DO2.2.13 I do not consider the proposed addition to these policies is necessary. Geotechnical engineering reports are submitted to the Council when applications for resource consent are made. This means that the Council will normally receive geotechnical reports for properties. Accordingly, I recommend that the submission point of Zero Carbon Nelson Tasman [S324.023] be rejected.

597. In respect to Transpower New Zealand Limited [S198.021, S198.022] seeking recognition of some activities with a functional and operational needs to locate within the Fault Deformation Overlay. No actual wording was provided with this submission and I am unsure which activities would be able to utilise the policy if the word 'some' was used. EQC Toka Tū Ake (FS73.005] opposed this submission point and I support that view. Accordingly, I recommend that these submission points from Transpower be rejected. Although the submitter may want to suggest some appropriate wording at the hearing.

598. The further submissions of Toka Tū Ake (FS73.005, FS73.006 FS73.007] are accepted.

599. Later in this report I suggest possible changes to rule REr.73C which applies in the Fault Awareness Overlay which may necessitate consequential changes to DO2.2.12. Consequently, the request by Toka Tū Ake EQC [S203.010] to retain DO2.2.12 as notified is accepted in part as is the further submissions in opposition.

12.3.4 Recommendations

600. In summary, in respect to the fault hazard policies, I recommend the following changes:

Provision(s)	Officer recommendations
DO2.2.11	Amend the numbering of the Explanations and Reasons, and the Methods to be consistent with the numbering of the Policy. This change is included in the consolidated S42A version of PC29 available on the Hearing website.

12.3.5 Section 32AA further evaluation

601. As this is a minor correction to the numbering no further evaluation under s32AA is required.

12.4 The appropriateness of the fault hazard rules, including definitions

12.4.1 Notified PC29

602. This section discusses the fault hazard rules and associated definitions included in notified PC29.

603. As identified in the s32 Report at page 81 the rules associated with the Fault Deformation Overlay are included in Chapter 7 Residential Zone and in Chapter 9 Suburban Commercial zone. The Fault Awareness Overlay is found only in the Residential Zone. A summary of the provisions is provided in the s32 at page 81 which I will not repeat here. The Residential Zone rules comprise REr.73A to REr.73C and REr.110 and REr.110A, covering the Fault Deformation Overlay and the Fault Awareness Overlay. In the Suburban Commercial Zone the relevant rules are SCr.70W -SCr.70Y and SCr.79.

604. The Fault Deformation overlay rules address buildings and network utilities, additions to buildings and network utilities, accessory buildings and subdivision, while in the Fault Awareness Overlay the rules relate to new residential units and subdivision.

605. There are no fault hazard specific definitions in the notified PC29.

12.4.2 Submissions

606. Submissions concerning the Fault Hazard rules and associated definitions generally include the following matters:

a) Support for the provisions to be retained.

b) Further submissions to the above requesting the provisions be delted.

c) Implementation of a geotechnical certification process for existing properties to enable exemption from the new resource consent requirements.

d) Specific exceptions for telecommunication network utilities within the Fault Deformation Overlay.

e) Review and correction of the numbering, where errors have been picked up by submitters.

f) Additional assessment matters including addressing emergency management plans.

607. Transpower New Zealand Limited [S198.041, S198.040] seeks that REr.73 be retained but consider that the numbering of Rer73.3 needs amended. Toka Tu Ake EQC [S203.016, S203.017, S203.018, S203.019] also support REr.73 and 73A and REr.110 and REr.110A in the Fault Deformation and Fault Awareness overlays and include support for similar rules in the Suburban Commercial Zone (SCr.70W and SCr.70X, SCr.79). Support is also provided for including provisions which will require setbacks from fault zones from Manuka Street Hospital [S881.007].

608. The submissions of Toka Tu Ake EQC [S203.016, S203.017, S203.018, S203.019] each received five further submissions[39] in opposition

609. Connexa [S487.009], Chorus New Zealand Limited [S486.009], Aotearoa Tower Group Limited (trading as FortySouth) [S488.009], One New Zealand Limited [S490.009], Spark New Zealand Trading Limited [S491.009], seek that telecommunication network utilities be provided with an exemption from REr.73.1 so that telecommunication network utilities are a permitted activity in the Fault Deformation Overlay. Further submissions opposing this submission were received from EQC Toka Tū Ake [FS 73.040, FS73.038].

610. 588 Limited [S766.008, S766.009, S766.010, S766.011], Bayview Nelson Limited [S767.009, S767.010, S767.011, S767.012], GP Investments Limited [S845.044, S845.045, S845.046, S845.047] North Nelson Limited [S755.006, S755.0015, S755.016, S755.0017], Suffolk Heights Limited [S768.007, S768.008, S768.009, S768.010], seek engineering certification exemption for Rules REr73, REr73A, REr.73B, and REr73C.

611. The submissions of 588 Limited [S766.008, S766.009, S766.010], Bayview Nelson Limited [S767.009, S767.010, S767.011, S767.012] and GP Investments Limited [S845.044, S845.045, S845.046, S845.047] each received one further submission in opposition.

612. Manuka Street Hospital Limited [S881.024] and Toka Tu Ake EQC [S203.022] support Rule REr.73C, which requires restricted activity consent for new residential units within the Fault Awareness

[39] FS41.022, FS43.023, FS44.022, FS45.023, FS49.028, FS41.023, FS43.024, FS44.023, FS45.024, FS49.029, FS41.023, FS43.024, FS44.023, FS45.024, FS49.029, FS41.025, FS43.026, FS44.025, FS45.026, FS49.031

Overlay. While further submissions to Toka Tu Ake EQC [S203.022] seek that the rule be deleted. The reasons stated for opposing Toka Tu Ake EQC [S203.022] support for rule REr.73C is as follows: The EQC submission is opposed in full on the basis that the hazard provisions within PC29 do not have a sound resource management basis and so the section 32 assessment is fundamentally flawed. There are significant implications to landowners from these proposed provisions and so it is critical that the information supporting PC29 is accurate and reliable.

613. Te Whatu Ora [S709.087, S709.092] seeks two amendments to the assessment criteria for the Fault Deformation and Fault Awareness Overlays. They seek that 'people' be added to clause b and that the following new clause e. be added: 'the extent to which the proposed activity impacts emergency management plans'.

614. The submission of Te Whatu Ora [S709.087] received one further submission [FS73.053] in support.

615. 588 Limited [S766.027, S766.029], Bayview Nelson Limited [S767.027, S767.029], GP Investments Limited [S845.062, S845.063] North Nelson Limited [S755.010, S755.039], Suffolk Heights Limited [S768.023, S768.024] seek retention of REr.110.1 and REr.110.3 and REr.110A.1 and REr.110A.3.

12.4.3 Evaluation

616. I have considered the issue of the requirement under Rule REr.73C for new residential units in the Fault Awareness Overlay and consider that it is not a helpful rule. In the Fault Awareness Overlay it is not possible to define where the fault is, and if this information has not come forward in wider subdivision processes, requiring additional geotechnical work to determine its location at the land use stage for individual sites is unlikely to provide any greater information on which to base a setback from the fault line. Mr Chamberose agrees with this assessment in his evidence at paragraph 6.22 where he explains the difficulties associated with determining where the fault lies within these less well-defined areas.

617. However, there is no specific original submission requesting either deletion of the Fault Awareness Overlay or the specific rule itself. However, as indicated above there is a further submission opposing the support provided by Toka Tu Ake EQC [S203.022] for the rule. I consider it may be appropriate to utilise this further submission to amend the rule or delete it entirely. It may be appropriate to restrict the rule to large or taller buildings with high occupancy similar to the rule in the operative plan at Seymore Avenue and Cambria Street. I propose to consider this further with Mr Chamberose and present an alternative to deleing the rule altogether.

618. Accordingly, with respect to REr73C in Fault Awareness Overlay I recommend that Toka Tu Ake EQC [S203.022] and Manuka Street Hospital [S881.007] are rejected and the further submission in opposition to Toka Tu Ake EQC [S203.022] is accepted (these are shown in Appendix 1).

619. I have already considered the issue of whether an engineering certification process or exemption process would be appropriate for sites which already have recent site-specific geotechnical assessments including conditions and potentially consent notices as part of the subdivision consent process, in terms of the slope instability rules. I consider the same approach could apply in this case as well, and I refer to my earlier discussion on this at paragraph 549.

620. Taking into consideration my evaluation above of the submissions received on the Fault Deformation Overlay, I recommend that Manuka Street Hospital Limited [S881.024] is accepted in part and the submissions of 588 Limited, Bayview Nelson Limited, GP Investments Limited,

North Nelson Limited, and Suffolk Heights Limited[40] are accepted in part to the extent that I am recommending a pathway to streamline the process that applies where there are existing recent geotechnical assessments available for sites.

621. My recommendations on the further submissions to the above submission points are in Appendix 1.

622. I do not consider the amendments requested by Te Whatu Ora [S709.087, S709.092, S709.014] add anything to the assessment criteria and I recommend that they be rejected.

623. My recommendations on the further submissions to the above submission points are in Appendix 1.

624. In respect to the submissions of 588 Limited, Bayview Nelson Limited, GP Investments Limited, North Nelson Limited, and Suffolk Heights Limited[41] their support for REr.110.1 and REr.110.3 and REr.110A.1 and REr.110A.3. is accepted. No amendments are proposed to these provisions.

625. My recommendations on the further submissions to the above submission points are in Appendix 1.

626. The request by Connexa [S487.009] et al, above has been discussed in section 10. I do not consider it appropriate to provide an exemption from REr.73.1 so that telecommunication network utilities are automatically a permitted activity in the Fault Deformation Overlay, for the same reasons provided in Section 10. Consequently, I recommend that this group of submissions be rejected, and the further submissions from EQC Toka Tū Ake (identified in Appendix 1) be accepted.

627. The request by Transpower New Zealand Limited [S198.041], to retain REr.73A can be recommended to be accepted, and submission point S198.040] to retain REr73.can be recommended to be accepted in part, as I did not consider the numbering required alteration. Transpower may be able to clarify the relief sought at the hearing. The submission points from Toka Tu Ake EQC [S203.016, S203.017, S203.018, S203.019] to support REr.73 and 73A in the Fault Deformation and include support for similar rules in the Suburban Commercial Zone (SCr.70W and SCr.70X) are recommended to be accepted.

628. The submission point Manuka Hospital [S881.007] in support of provisions that will result in setbacks from fault zones being applied to developments are also accepted.

12.4.4 Recommendations

629. In summary, in respect to the fault hazard rules, I recommend the following amendments:

Provision(s)	Officer recommendations
Rules REr73, REr.73A, REr.73B	**Amend** the Residential land use rules in the Fault Deformation Overlay and Fault Awareness Overlay to include a controlled activity pathway

[40] S766.008, S767.009, S845.044, S755.006, S768.007, S766.009, S767.010, S845.045, S755.015, S768.008, S766.010, S767.011, S845.046, S755.016, S768.009, S766.011, S767.012, S845.047, S755.017, S768.010

[41] S766.027, S767.027, S845.062, S755.010, S768.023 S766.029, S767.029, S845.063, S755.039, S768.024.

Provision(s)	Officer recommendations
	for sites with geotechnical assessments less than 5 years old at time of application.
REr.73C	**Amend/Delete rule REr.73C** Note: I am utilising the further submissions in opposition to Toka Tū Ake EQC [S203.022] to amend or delete REr73C in the Fault Awareness Overlay. Consequential changes will be required to DO2.2.12, to alter of remove references to 'residential buildings'.

12.4.5 Section 32AA further evaluation

630. As I recommend changes to the Fault Deformation Overlay and Fault Awareness Overlay rules above, further evaluation is required under s32AA. As indicated in the evaluation above there are costs and benefits associated with introducing new rules to address fault hazards. In this instance I have considered those costs and benefits alongside the effectiveness and efficiency of the rules themselves in achieving the objective DO2.2.

631. It is my opinion that the amendments are more appropriate than the notified versions in achieving DO2.2. The proposed changes to provide a streamlined process through a controlled activity pathway and to amend or delete Rule REr.73C will reduce the administration costs and costs to property owners, but still enable the risks associated with natural hazards to people, property and infrastructure in Whakatū Nelson to be recognised and managed. The amended provisions will also ensure significant risks are avoided.

12.5 The robustness of the fault hazard mapping

12.5.1 Notified PC29 Fault Deformation and Fault Awareness Overlays

632. Two fault hazard areas were notified in PC29 a Fault Deformation Overlay and a Fault Awareness Overlay. These two overlays are described along with associated provisions in the s32 Assessment and in the evidence of Mr Chamberose, so I will not repeat that discussion here. However, in summary the Fault Deformation Overlay is a revision of the Fault Hazard Overlay in the operative NRMP and was undertaken by BECA in 2021[42]. The purpose of the fault overlays is to identify where faults could potentially deform or rupture the ground surface to inform a requirement for additional geotechnical assessment, and in particular to define the fault's location. The

[42]Beca, 2021. Revised Nelson Fault Deformation Overlay, Report prepared for Nelson City Council by Beca Limited, Christchurch, New Zealand. Revision 3, dated 10 December 2021

geotechnical assessment is also required to provide expert opinion on whether land close to the faults should occur and advise on any mitigation[43].

633. The revisions to the Fault Deformation Overlays followed Step 1 and 2 of the MfE Guidelines on 'Planning for Development of Land on or Close to Active Faults – a risk-based approach (Kerr et all. 2003). Using this process a fault width was defined, and a buffer zone was applied using 'engineering judgement, confidence of the fault's location and information constraining its location'[44].

634. The Fault Awareness Overlay identifies areas of the Fault Deformation Overlay that are less well defined, and hence significant uncertainty around the specific fault location and are typically deeply buried and no surface expression is observable on the ground surface[45]. The Fault Awareness Overlays generally link together more defined parts of the Fault Deformation Overlay, and this can be seen on the planning maps.

12.5.2 Submissions

635. Submissions concerning the Fault Deformation and Fault Awareness Overlays generally include the following matters:

a) Support for the overlays to be retained.

b) Accuracy of the graphical extent of the fault boundaries generally in terms of methodology

c) Specific properties where existing site specific geotechnical information disagrees with the proposed location shown on the planning maps.

636. 588 Limited, Bayview Nelson Limited, GP Investments Limited, North Nelson Limited, Suffolk Heights Limited, have concerns over the accuracy of the Fault Deformation Overlay boundaries[46], and the Fault Awareness Overlay boundaries[47]. The submitters are primarily concerned that there is more site-specific geotechnical information that is more accurate than the work that thePC29 relies on.

637. The submissions of 588 Limited [S766.002, S766.003], Bayview Nelson Limited [S767.002, S767.003] and GP Investments Limited [S845.002, S845.003] each received one further submission[48] in opposition. The submissions of Suffolk Heights Limited [S768.002, S768.003] received two further submissions [FS37.001, FS37.002] in support.

---

[43] Beca, 2021. Revised Nelson Fault Deformation Overlay, Report prepared for Nelson City Council by Beca Limited, Christchurch, New Zealand. Revision 3, dated 10 December 2021 – page 3

[44] Beca, 2021. Revised Nelson Fault Deformation Overlay, Report prepared for Nelson City Council by Beca Limited, Christchurch, New Zealand. Revision 3, dated 10 December 2021 – page 6

[45] Beca, 2021. Revised Nelson Fault Deformation Overlay, Report prepared for Nelson City Council by Beca Limited, Christchurch, New Zealand. Revision 3, dated 10 December 2021 – page 9

[46] S766.002, S767.002, S845.002, S755.001, S768.002

[47] S766.003, S767.003, S845.003, S755.002, S768.003

[48] FS73.061, FS73.150, FS73.080, FS73.151, FS73.102, FS73.103

638. Barry Chamberlain [S358.002] requests that the fault deformation overlay be removed from their property at Andy Whiting Place, Stoke.

639. The submission of Barry Chamberlain [S358.002] received one further submission [FS49.010] in support.

640. Nelson Consulting Engineers [S948.001] query the accuracy of the Fault Deformation Overlay at the Homestead Lane Subdivision in Marsden Valley and request that it be removed. They also request that the Fault Deformation Zone Maps be amended to only include active faults that are published on the GNS Science Geological maps [948.002].

12.5.3 Evaluation

641. Submission points seeking removal of all, or parts of the Fault deformation Overlays are covered in the evidence of Mr Chamberose. He states that 'the fault overlays are not intended to replace site specific hazard assessments that have previously been completed at a site. As land continues to be developed, new information will come to light that will further refine the fault overlays[49]. The Fault Hazard overlays act as a trigger for land use planning regulations to take effect so that further information can be sought to determine the appropriateness of development.

642. Mr Chamberose indicates that new information is available in respect to Bayview Nelson Limited [S767.002] site off Bayview Road (and Frenchay Drive) and provides recommended changes to the alignment and width of the Fault Deformation overlay through this site[50]. I agree that these amendments are appropriate and recommend that Bayview Nelson Limited submission point [S767.002] is accepted.

643. My recommendations on the further submissions to the above submission points are in Appendix 1.

644. Additional earthworks exposures and specific site investigations have been assessed to address the submission of Nelson Consulting Engineers [S948.001] and has resulted in reconsideration of the location of the Jenkins Fault in Marsden Valley. Mr Chamberose discusses this in detail in his evidence and recommends that the Fault Deformation Overlay be removed from the Jenkins Fault between Marsden Valley Road to Enner Glynn Road. I agree with this assessment and recommend that this submission point from Nelson Consulting Engineers [S948.001] be accepted. However, I recommend that the second submission point by Nelson Consulting Engineers [S948.002] be rejected, as the approach suggested does not acknowledge the more detailed work undertaken by Beca.

645. Mr Chamberose has assessed site specific information in respect to the other properties and does not consider any other changes are necessary. I accept his evidence and recommend that the submissions of S766.002, S845.002, S755.001, S768.002, S766.003, S767.003, S845.003, S755.002, S768.003 be rejected.

646. My recommendations on the further submissions to the above submission points are in Appendix 1.

[49] Paragraph 6.14 Evidence of Dan Chamberose, dated 24 June 2024

[50] Paragraph 6.15 Evidence of Dan Chamberose, dated 24 June 2024

12.5.4 Recommendations

647. In summary, in respect to fault hazard mapping, I recommend that the Fault Deformation Overlay be amended as follows:

Provision(s)	Officer recommendations
Planning Maps-Fault Deformation Overlay	**Amend** the width and alignment of the Fault Deformation Overlay over the Bayview Limited Property as shown in Appendix 6.
Planning Maps- Fault Deformation Overlay	**Remove** part of the Fault Deformation overlay between Marsden Valley Road to Enner Glynn Road as shown in Appendix 6.

12.5.5 Section 32AA further evaluation

648. As I recommend changes to the Fault Deformation Overlay at Marsden Valley and at Bayview Limited property off Bayview Road further evaluation is required under s32AA. The changes to the Fault Deformation Overlay, in my view, utilise more up to date information and hence more appropriately and accurately reflect the fault hazard in those two localities. I consider the changes to be more appropriate in achieving the Objective DO2.2 than the notified PC29. I also consider that there is sufficient information to agree to the changes requested by the two submitters.

13.0 Conclusion

649. This report has provided an assessment of submissions and further submissions received on the proposed new natural hazard provisions in relation to their spatial extent of overlays, the objectives and policies, land use and subdivision provisions and related definitions. The primary amendments that are recommend are outlined in the sections above and are listed in the Executive Summary.

650. Sections 8-12 considers and provides recommendations on the decisions requested in submissions and further submissions. We consider that the submissions on the topics addressed in this report should be accepted, accepted in part, or rejected, as set out in our recommendations in this report and contained in Appendix 1 of this report.

651. We recommend that provisions outlined in the of the proposed new natural hazard provisions should be amended for the reasons set out in this report and located in the consolidated S42A version of PC29.

652. We consider that the amended provisions will be the most appropriate, for the reasons set out in the relevant sections in this report and the section 32AA evaluations undertaken.