

Proposed Natural Resources Plan for the Wellington Region

**Supplementary Right of Reply
For Hearing Stream 6**

Report date: 6 August 2018

Topic: Natural hazards

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1. Introduction and scope

1. The Hearing Panel requested additional information during the Right of Reply hearing on 31 July 2018 for natural hazards. That being:
 - a) A colour version and key explaining the risk matrix presented in the Right of Reply hearing.
 - b) Consistency of the recommended amendments to the definition of risk-based approach with regard to the use of the terms “development” and “site”.
 - c) The recommended amendment to Objective O20.

2. Risk Assessment Matrix

2. The first point of clarification relates to the matrix used to determine risk using a risk-based approach.

| | | Consequences | | | | |
|------------|---|--------------|----|----|----|---|
| Likelihood | | 1 | 2 | 3 | 4 | 5 |
| 5 | 5 | 10 | 15 | 20 | 25 | |
| 4 | 4 | 8 | 12 | 16 | 20 | |
| 3 | 3 | 6 | 9 | 12 | 15 | |
| 2 | 2 | 4 | 6 | 8 | 10 | |
| 1 | 1 | 2 | 3 | 4 | 5 | |

3. In this matrix, green and blue indicate acceptable risk, yellow and orange indicate tolerable risk, and red indicates intolerable risk.

3. Risk-based approach definition amendments

4. The Panel has requested clarification on multiple points regarding the recommended amendments to the definition of “risk-based approach”.

5. The first point of clarification relates to defining the extent of the area around the site or development. The RPS does not provide any specific direction on this: Policy 51(e) just directs that particular regard shall be given to “any risk and consequences beyond the development site”. There is no guidance as to how far beyond.
6. It is my view that it is not possible to provide a specific delineation of the extent around the development site that should apply. This will vary considerably activity to activity on a case-by-by case basis, and will be determined to a significant degree by the scale of a development. Using the example of a culvert, the risk and consequences will vary in spatial extent depending on the size of the culvert. The size of the culvert determines possible upstream flooding risk; a smaller culvert allows less water to flow through and is more vulnerable to blockage, and thus presents a greater risk than a larger culvert.
7. The second point concerns the use of the words “site” and “development”. The recommended amendments refer only to “development”, but the definition refers to both “site” and “development”.
8. The relevant clause in the RPS, Policy 51(e) refers to risks and consequences beyond the “development site”. While using both words it is my view that this clause is referring to the site where the development is taking place, rather than the development per se. This is the only reference to a “site” in Policy 51 of the RPS.
9. It is however my view that the best way to examine whether the word “development” or “site” (or both) is most appropriate is to focus on the nuance of each word and what they mean. A “site” is a fixed physical location that may be affected by hazards but would generally not vary in risk, as risk would depend on how the site is used or developed. A “development” meanwhile is the structure or use that the site is being used for, and depending on what the development is the risk can vary considerably depending on the exposure and vulnerability of the development.

10. In clause (a) of the definition of risk-based approach, the focus is on the scale, engineering design and intended life of the development. Scale, design, and life cannot really apply to a site, but can apply to a development, and thus the use of the word “development” is correct. Similarly, clause (b), which refers to the likelihood, frequency, and magnitude of hazard events that could affect the site or development is correct in referring to both terms, and hazard events can affect either.
11. With regard to the two clauses of the definition of risk-based approach I have recommended amendment to, it is my view that one is correct and one requires further amendment. Clause (c) refers to vulnerability and exposure, which is only applicable to a development and not to a site. Thus, the clauses reference to “development” only is correct, and the recommended amendment is also correct.
12. For clause (d), it is my view that it is correct to refer to both “site” and “development” when referring to adverse effects, as such effects could impact on both a site and a development. After further consideration, it is my view that clause (d) of the definition of risk-based approach should read as follows:

(d) the severity of any physical, social, economic and environmental consequences that could arise from natural hazard events affecting [both](#) the site or development [and areas around the site or development](#).
13. The change from the Right of Reply report for natural hazards is the insertion of “[site or](#)” into clause (d) of the definition of risk-based approach.
14. In my view scope for this amendment is provided by S93/001 from Coastal Ratepayers United, which sought that the provisions of the proposed Plan comply with the RPS.

4. Wiring diagram and Objective O20 amendment

15. The final point of clarification concerns the amendments to Objective O20 and whether there are rules and policies that achieve the objective.
16. I have created a wiring diagram showing the linkages between relevant provisions from the RPS and NZCPS to the hazards provisions from the proposed Plan. This diagram is attached as a separate document as Appendix B of this supplementary Right of Reply – it is an Excel file that can be printed as an A3 document.
17. In my view there are two options for Objective O20. First, a consistent approach, directing that risks must be acceptable, as was the case in the notified Plan. Second, an approach that distinguishes between the CMA and beds of lakes and rivers, with risk being required to be not increased in the former and acceptable in the latter. I recommended this second approach be adopted in my Right of Reply.
18. Having considered this matter further, I recommend that Objective O20 be retained as notified, rather than amended as recommended in my Right of Reply report. The objective would thus no longer distinguish between coastal hazards and those in the beds of lakes and rivers, and would set a single direction: that risk is acceptable.
19. While I acknowledge that the Minister of Conservation has submitted requesting that the proposed Plan directs that risk from coastal hazards is not increased, I have examined both the Minister's submission and other submissions and cannot find scope to recommend the amendments that would be required to implement this direction to avoid increases in risk from coastal hazards throughout the rest of the proposed Plan.
20. In my view if Objective O20 was amended to distinguish between different kinds of risk, the proposed Plan would require significantly wider amendment to implement this direction, especially in the rules. For example, the controlled and restricted discretionary rules for activities in the CMA would require amendment to specify that risk and residual risk are matters of control/discretion, and I do not believe there is scope for such an amendment.

Given that such an amendment would have significant implications on the proposed Plan and how it operates, I am of the view that it is not appropriate to recommend such amendments as Clause 16 or consequential amendments.

21. I note that “acceptable” is a term that is defined with regard to risk. As noted above, GNS describe risk as acceptable only if both the frequency of hazards and the consequences that would result are low – acceptable risk is lower than tolerable risk. In my view this is not inconsistent with the intent of Policy 25(a) of the NZCPS, which I understand seeks to prevent harm from coastal hazards where possible, while the document more broadly seeks to balance the need to protect development against risk from coastal hazards while allowing use and development where appropriate.
22. In my view the term “acceptable” is more practical, in that it directs that consequences (and the resulting risk and residual risk) are essentially insignificant. I am also of the view that it would be very difficult to not increase risk and residual risk from use and development in the CMA and that such direction would require almost complete avoidance of use and development in the CMA once given effect by the proposed Plan’s policies and rules. Furthermore, I am of the view that such direction would be at odds with the direction of Policy 6 and 27(1)(c) of the NZCPS to recognise that infrastructure (for example) within the CMA can be beneficial to communities and that in certain circumstances may be the only practicable option.
23. I am of the opinion that the term “acceptable” balances the NZCPS’s multiple directions concerning use and development by recognising that use and development may be appropriate and necessary, but that said use and development should not significantly increase risk.
24. In summary, it is my view that retaining the notified wording of Objective O20 is not inconsistent with the NZCPS and reflects the limited scope that exists to make changes regarding risk in the proposed Plan.
25. I thus recommend that Objective O20 is retained as notified:

The **risk, residual risk,** and adverse effects from natural hazards and climate change on people, the community, and infrastructure are:

~~(a) not increased in the coastal marine area, and~~

~~(b) acceptable. in the beds of lakes and rivers.~~

Appendix A: Natural hazards – Section 32AA Assessment

This table sets out only the provisions of the notified proposed Plan on this topic **for which submissions were specifically received**. Recommended additions to the notified text are in underline and deletions are ~~strike-through~~ text. The section 32AA assessment follows alongside for each of the provisions where amendments have been recommended by the officer. If the officer does not recommend any changes, the provision appears in grey.

Red text amendments = recommendations from the officer's s42A report

Blue text amendments = updated recommendations from the officer's Right of Reply

Note that requests for **new** provisions are not included in these tables.

| Issue No. from Section 42A report and section of right of reply report | Chapter from the proposed Plan | Provision from the proposed Plan | Requested amendment | Evaluation of amendment (Section 32AA assessment) |
|--|--------------------------------|---------------------------------------|---|--|
| S93/001 S286/017 | 2 Interpretation | Risk-based approach (natural hazards) | <p>A risk-based approach takes account of the intended purpose of a development, the likelihood of natural hazard events occurring the vulnerability and exposure of the site, use or development, the severity and consequences of potential hazard events and the costs and benefits of acting or not acting. An assessment <u>is required as part of a resource consent application in high hazard areas and</u> needs to be commensurate with the size and scale of the use or development. The risk can be evaluated on a scale from low to high or acceptable to intolerable assessed on the basis of:</p> <p>(c) the scale, engineering design and intended life and use for the</p> | <p>Effectiveness and efficiency:</p> <p>This recommended amendment enhances the provision's efficiency by clarifying when an assessment is needed, more clearly explaining the boundaries of risk in the proposed Plan. After further consideration, I am of the view that the recommended amendments to the clauses are the most efficient and effective means of giving effect to the RPS.</p> <p>Costs (environmental, economic, social, and cultural):</p> <p>There may be financial costs associated with requiring assessment of effects beyond the development site – the</p> |

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| | | | <p>development, and</p> <p>(d) the likelihood, frequency and magnitude of natural hazard events that could potentially affect the site or development, and</p> <p>(e) the vulnerability and exposure of both the development and areas around the development to natural hazards, and</p> <p>(f) the severity of any physical, social, economic and environmental consequences that could arise from natural hazard events affecting both the site or development and areas around the site or development.</p> | <p>scale increases and may require more time/resources to complete.</p> <p>Benefits (environmental, economic, social, and cultural): There may be an environmental benefit in requiring the consideration of effects more broadly than those at just the site.</p> <p>Risk of acting or not acting: Not acting leaves a gap in the definition's alignment with the RPS, and may lead consent applicants to include risk assessments with applications when not required.</p> <p>Decision about most appropriate option: I consider that this proposed amendment is the most appropriate means of addressing issues raised by submitters while emphasising efficiency and effectiveness.</p> |
| 3 Objectives | Objective O20 | The risk, residual risk , and adverse effects from natural hazards and climate change on people, the community, and infrastructure are: | <p>(a) not increased in the coastal marine area, and (b) acceptable. in the beds of lakes and rivers.</p> | <p>Effectiveness and efficiency: It is my view that this amendment would be more efficient than having two distinct approaches for different kinds of hazards in that it would not require policies and rules to approach hazards and risk differently.</p> <p>Costs (environmental, economic, social, and cultural): There is a potential environmental cost to adopting this</p> |

| | | | | |
|--|--|--|--|---|
| | | | | <p>slightly more permissive approach to use and development in the CMA, but given most permitted, controlled, and restricted discretionary activities are likely to have minor adverse impacts, I consider the costs to be low.</p> <p>Benefits (environmental, economic, social, and cultural): There is a benefit to having a single approach to managing hazards in that it creates consistency across the Plan and reduces confusion for Plan users. There is also an economic and social benefit to enabling use and development in the CMA that has acceptable levels of risk.</p> <p>Risk of acting or not acting: Not acting leaves the proposed Plan with an objective level direction that is not and cannot be reflected at the policy and rule level due to scope.</p> <p>Decision about most appropriate option: I consider that this proposed amendment is the most appropriate means of directing the proposed Plan's approach to managing natural hazard risk while focusing on efficiency and effectiveness.</p> |
|--|--|--|--|---|

Appendix B: Natural hazards – wiring diagram

