

BEFORE A PANEL OF COMMISSIONERS APPOINTED BY THE TAUPO DISTRICT COUNCIL

IN THE MATTER OF:

The Resource Management Act 1991

AND

IN THE MATTER OF:

Plan Change 34 (Flood Hazards) to the Taupo
District Plan

STATEMENT OF EVIDENCE OF REUBEN CHRISTIAN HANSEN

1.0 QUALIFICATIONS AND EXPERIENCE

1.1 My name is Reuben Hansen. I am an Environmental Planner and Principal of Tonkin & Taylor Ltd ("T+T"). I hold the following qualifications:

- Masters Degree with Distinction in Environmental Planning from Waikato University;
- Post Graduate Diploma in Applied Science from Massey University; and
- Bachelors Degree in Science majoring in Natural Resource Management from Massey University.

1.2 I am a full member of the New Zealand Planning Institute, the Resource Management Law Association and the New Zealand Coastal Society.

1.3 I have 17 years of experience in all facets of planning, resource and environmental management relating to: resource consent application preparation; resource consent processing; policy development and review, and environmental monitoring and management plans and reporting.

1.4 Prior to joining T+T in 2012 I was employed by the Bay of Plenty Regional Council ("BOPRC"), the Port of Tauranga and a planning consultancy firm.

1.5 Since joining T+T I have specialised in coastal and flood management and planning. Of particular relevance to Plan Change 34 ("PC34"), I have been involved in consent acquisition and policy and strategy development associated with erosion and inundation issues on open coast, lake and harbour shorelines throughout New Zealand for local authorities, private land owners, transportation infrastructure providers, and government departments.

1.6 I have experience in the development of strategy and policy relating to natural hazards. For example, I was engaged by the BOPRC to undertake a critical review of, scenario testing of, and reporting on, draft natural hazard provisions contained within their second generation Regional Policy Statement.

- 1.7 Further, I was a member of a working party of experts formed by the BOPRC to develop a risk based approach framework for natural hazard policy for inclusion in their second generation Regional Policy Statement. I was a co-author of the final working party report to the BOPRC. This was the first Regional Policy Statement in New Zealand to take a risk-based approach to the management of natural hazards.
- 1.8 I have also received an award from the New Zealand Planning Institute for my input to the Ministry for the Environment's risk based approach to natural hazards under the Resource Management Act 1991 ("RMA") project.
- 1.9 I appear for Mercury NZ Limited ("Mercury") and my evidence is in support of their submission and further submission on PC34, which I assisted with the preparation of.

2.0 HEARING PREPARATION

- 2.1 My preparation for this hearing has involved reviewing the s 42A report prepared for the consideration of the Panel by Ms Mavor. I have reviewed Mr Payne's hydrological evidence for Mercury. I have also reviewed segments of Dr McConchie's evidence that relate to lake wave activity. As to the balance of Dr McConchie's evidence, I have given consideration to his key findings that are reported through the s 42A report.
- 2.2 I confirm I have read the Code of Conduct for expert witnesses contained in the Environment Court's Practice Note and I agree to comply with it. The opinions expressed in this evidence are mine and within my expertise and experience.

3.0 SCOPE

- 3.1 As directed by the Chair¹, the scope of my evidence is confined to:
- Matters where there are differences in opinion between Ms Mavor and myself as to whether a particular provision of PC34 is the most effective or appropriate way of dealing with the issue raised by Mercury in its submission (hereafter referred to as "the matters in contention");
 - The reasons for the differences in opinion;
 - Why my opinion should be preferred and by inference, the relief sought by Mercury if accepted by the Panel.
- 3.2 I understand that Ngati Kurauia and Taupo District Council ("TDC") convened a hui on 2 October 2018. I have not had an opportunity to review the record of the issues discussed and any agreements made between the parties. Consequently, this evidence does not address any of the outcomes of the hui. This is relevant because Mercury lodged a further submission against Ngati Kurauia's primary submission.

¹ Paragraph 11 of *Minute No. 1 from the Chair of the Hearing Panel Constituted to Hear Submissions on Plan Change 34- Flood Hazard* issued 11 September 2018.

4.0 THE MATTERS IN CONTENTION

4.1 The effect of lake wave activity and set up on the landward extent of inundation has been deliberately excluded from the flood hazard maps and the policy framework of PC34.

4.2 I agree with Ms Mavor's view, expressed on Page 42 of her s 42A report, where she cites why a delay of PC34 would be counterproductive.

4.3 I disagree with:

- Ms Mavor's recommendation that PC34 should be completely silent on lake wave activity.
- Ms Mavor's explanation as to why PC34 need not incorporate any of the provisions proposed by Mercury in the relief sought relating to wave activity.
- Ms Mavor's opinion that wave activity is a separate natural hazard to inundation.

4.4 In my opinion, wave activity and set up issues need to be recognised within PC34. This is because, in my experience, the highly technical nuances associated with wave effects and the static water level of the lake affecting flood and erosion hazards around the shoreline are poorly understood by the community.

4.5 The Waikato Regional Policy Statement ("RPS") requires natural hazard risks to be managed using an integrated and holistic approach² and to take a risk based approach to the management of subdivision, use and development around the lake shoreline³. Of particular significance, the RPS requires that PC34 enhances community resilience⁴, takes a "whole of system" approach⁵ (in so far as natural systems are concerned), and uses the best available information /best practice⁶.

4.6 The RMA is clear that PC34 needs to give effect to the RPS. In my opinion, the recommended provisions of PC34, as set out in Appendix D of Ms Mavor's evidence, do not give effect to the RPS.

4.7 This is because there is a relationship between inundation, waves and erosion around the lakeshore. It is incorrect to treat inundation and wave activity as separate natural hazards as suggested by Ms Mavor. The hazards are inundation and erosion. Wave activity is a factor that influences those hazards in the same way that high intensity rainfall and climate change influence those hazards. I note that in Paragraph 79 of Dr McConchie's evidence he states (emphasis added): "*...high water levels in Lake Taupo comes from four sources:*

...

*(c) Waves acting on top of high water levels, **effectively increasing the 'reach' of the water;***
and

² Policy 13.1.

³ Policy 13.2.

⁴ Policy 13.1.

⁵ Ibid.

⁶ Ibid.

...

- 4.8 TDC does have “indicative” information around the “potential” wave run up, and lakeshore communities should have access to this information until more accurate and up to date information becomes available. In my opinion, this requires more than just making information available on the Council’s website and alerting potential property purchasers through Land Information Memoranda. The RPS requires communities’ resilience to be enhanced and one of the basic foundations of a risk-based approach relates to the community having an appreciation of risk. Enhancing community resilience clearly requires a significant improvement of the status quo, in terms of providing information, education and advocacy relating to natural hazards.
- 4.9 An anticipated environmental outcome contained in the District Plan⁷ is: “Greater public awareness of natural hazards and their potential effects on people and development within the District.”
- 4.10 Based on all of the above considerations, it is my view that some of the interim measures (namely a policy and a method) set out in Mercury’s submission are appropriate and necessary. On that basis, my opinion should be preferred over Ms Mavor’s and the relief sought by Mercury accepted by the Panel.
- 4.11 Ms Mavor’s justification to the Panel for not accepting the wave activity related amendments proposed by Mercury is based on a lack of modelling work, a lack of consultation with the community regarding the “new” provisions, and that TDC’s s 32 RMA analysis has not evaluated the amendments. Again, Ms Mavor refers to wave activity as a separate natural hazard.
- 4.12 In my view, this error of Ms Mavor’s, in considering wave activity a separate natural hazard to inundation, is a significant contributing factor to her reaching her views paraphrased in paragraph 4.11 above.
- 4.13 I consider the Panel can and should include within PC34 one of the new policies and the new method proposed by Mercury to address the wave activity issue. The policy for inclusion under Chapter 3I is:
- To recognise that flood and wave activity around the shoreline of Lake Taupo can be caused by different processes, but their combination can exacerbate the consequence of inundation and erosion around the shoreline of Lake Taupo*
- 4.14 In my view, the policy can be incorporated into PC34 without any further s 32 RMA analysis and/or public consultation. This is because, as set out by Ms Mavor in her evidence, the District Plan already contains a Foreshore Protection Area Rule⁸ and one of the assessment criteria is “the potential for flood inundation or erosion from the District’s waterways and

⁷ 3I.5.iii

⁸ Rule 4e.2.1.

Lakes". Therefore, it follows that the policy meets the s 32 RMA test of being efficient and effective in achieving the objective because the rule has previously met this test.

- 4.15 The proposed policy is general in nature, directly relates to the rule and assessment criteria, will not impose any new restrictions or obligations on property owners (it's more informative than determinative), and arguably fills a gap in the District Plan where the rule is not supported by an applicable policy.
- 4.16 A significant benefit of adding the policy to PC34 is that it will apply to all areas around the Taupo-nui-a-tia shoreline, irrespective of the zoning and rules that apply to specific locations. Consequently, when a resource consent application is lodged for subdivision of land or construction of a building near the shoreline, applicants, their consultants and the TDC consent officers can determine whether site specific assessment/consideration needs to be given to the effect of wave activity on the modelled extent of inundation shown on the District Plan Maps or not.
- 4.17 The new method should be inserted to set out the actions needed in order to better understand the risks associated with wave activity. The new method for inclusion under 31.3 is:

Council will update the flood hazard areas shown on the planning maps and corresponding policies and rules once it has a detailed understanding of the effects of wave activity on erosion and inundation of the foreshore and backshore of Taupo-nui-a-Tia. Until such time as this update process is complete, Council will engage with its communities located around the lake shoreline regarding the potential for wave activity to exacerbate erosion as well as the extent of the flood hazard areas shown on the planning maps. This engagement could include, but not be limited to, including information in Land Information Memoranda and having dedicated space on the Council's website regarding lake shoreline hazards.

- 4.18 I note that Ms Mavor has discussed in her evidence that the wave activity issue will be addressed through the District Plan review. Ms Mavor has advised that the notification of the Proposed District Plan is likely to occur mid-2021. Consequently, the new policy and method set out under paragraphs 4.13 and 4.17 respectively would be interim measures.



Reuben Christian Hansen

8 October 2018