

**BEFORE PALMERSTON NORTH CITY COUNCIL**

**IN THE MATTER**      the Resource Management Act 1991

**AND**

**IN THE MATTER**      of a proposed plan change to rezone land at 611  
Rangitikei Line to establish the Whiskey Creek  
Residential Area

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**STATEMENT OF EVIDENCE OF JONATHON DAVID BELL**

**Dated 25 May 2022**

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**INTRODUCTION**

1. My full name is Jonathon (Jon) David Bell.
2. My evidence is given on behalf of the Manawatu-Wanganui Regional Council's Catchment Operations Group in relation to the proposed plan change to rezone land at 611 Rangitikei Line to establish the Whiskey Creek Residential Area.

**Qualifications and experience**

3. I am currently employed as Manager Investigations and Design at the Manawatu-Wanganui Regional Council ("**Horizons**"). I have been working for Horizons since 2011.
4. I hold a Masters in Civil Engineering from Cardiff University and am a Chartered Professional Engineer. As well as being a Chartered Member of Engineering New Zealand, I am a current committee member of the Rivers Group (a technical group of Engineering New Zealand and Water New Zealand).

5. I have practiced as a civil engineer with a particular interest in river engineering, and river and floodplain modelling since 2007. I have fifteen years of engineering experience, including time with the Environment Agency, as well as consultancy, in the United Kingdom in addition to my work with Horizons.

### **My role**

6. I have been involved with the design and management of the Lower Manawatu Flood Scheme and the Manawatu Drainage Scheme since 2011. This work has involved the Flyers Line spillway and the flood defences in the Benmore Avenue area.
7. My direct involvement with this Plan Change began in 2018, when I first discussed the area and its flood risk with Kevin Judd (as the requestor to this Plan Change). Since that time I have had numerous conversations with Mr. Judd around the outcomes that Horizons Catchment Operations Group needs to see and how these can be demonstrated.
8. Recently I have participated in a pre-hearing expert conference regarding flooding and stormwater matters (with the requestor's technical experts, and representatives of PNCC), and a pre-hearing meeting with submitters (4 May 2022). I have also been involved in meetings to discuss Horizons' submission with PNCC's planning and technical experts.

### **Code of conduct**

9. I confirm that I have read and agree to comply with Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014. I confirm that I have considered all the material facts that I am aware of that might alter or detract from the opinions that I express, and that this evidence is within my area of expertise.

### **Scope of evidence**

10. My evidence focuses on the issues of flood risk, and stormwater management. With these topics in mind, my evidence covers the following topics:
  - (a) What Horizons Catchment Operations Group's desired outcomes are; and

- (b) How this Plan Change could give effect to these.

### **HORIZONS' CATCHMENT OPERATIONS GROUP'S DESIRED OUTCOMES**

11. Horizon's manages two Flood Control and Drainage Schemes that could be affected by the proposed Plan Change; the Lower Manawatu Scheme and the Manawatu Drainage Scheme.
12. The Lower Manawatu Scheme provides flood protection from the Manawatu River and its tributaries to Palmerston North and surrounding area. This Scheme includes the stopbanking behind a number of properties on Benmore Avenue as well as the Flyers Line Spillway that diverts floodwaters from the Mangaone Stream. Water flowing from this spillway affects the land identified as being flood prone in this Plan Change area.
13. The Manawatu Drainage Scheme provides land drainage into an area known as the Taonui Basin, which is bounded by the Oroua River, Manawatu River, and Mangaone Stream. The land subject to this plan change ultimately drains into watercourses that are managed by this Scheme.
14. Horizons' Catchment Operations Group's interest in this Plan Change seeks to avoid any adverse effects on these critical Schemes. What this means, is that we are seeking to ensure that the proposed Plan Change will not lead to any increased risk of flooding to any other properties.

### **FLOOD RISK**

15. When discussing flood risk, in this section, I am referring to the flooding associated with the operation of the Flyers Line Spillway on the Mangaone Stream. It is these floodwaters that would inundate the area that is shown as flood prone within the District Plan.
16. For the land in this area to be developed it needs to be shown that this flood risk can be avoided or mitigated. It also needs to be demonstrated that any development will not create or exacerbate the flood risk to any other property.
17. The evidence of Mr. Wallace has shown that, with appropriate earthworks, the flood risk to the site (in a 0.5% AEP flood event) can be avoided. He has also shown that this can be done in such a way that there would be a less than minor change to flood risk to any other property.
18. Horizons Catchment Operations Group desires that it is ensured that these works are undertaken before the development of any house in the Plan Change Area begins.

This is to ensure that there are no new houses exposed to flood risk, and also to ensure that the development of an individual section does not exacerbate the flood risk to any other property.

19. This outcome has been clearly communicated to the requestor since the potential for a Plan Change was first discussed. This was reflected in the requestor's suggested placeholder annotation stating: "*The change to the Flood Prone Overlay shown here shall take effect once the earthworks authorised in Resource Consent XXXXXX have been fully implemented.*"
20. I note that in Mr. Asgar's S42a Report, he rejects this annotation.
21. In two separate subsequent meetings, I have discussed this point in detail with Mr. Preston (PNCC's technical expert), Mr. Asgar and Mr. Dunidam (PNCC's planning representatives), Mr. Jessen (PNCC's legal representative), as well as planners from Horizons. At these meetings I have been assured that the provisions in the Plan and associated documents will ensure that Horizons' desired outcome will be achieved.
22. As well as discussing this with PNCC's planners, I have also had advice from Horizons' Policy team, and I consider that the approach proposed by PNCC's consultant planner would be likely to give effect to Policy 9-2 of One Plan Part II: Regional Policy Statement, which provides direction on development in flood prone areas and when flood hazard mitigation is considered to have been achieved.

### **IMPACTS ON THE MANAWATU DRAINAGE SCHEME**

23. As the managers of the Manawatu Drainage Scheme, which covers a number of watercourses into which stormwater from the Plan Change ultimately drains, Horizons Catchment Operations Group seeks to ensure that any development in this area will not increase rates or volumes of stormwater run-off into the Drainage Scheme. This Scheme has not got any capacity to handle additional stormwater, as it already operates at capacity during relatively commonly occurring flood events.
24. I have again discussed this concern with Horizons' Policy Team and I have clarified that subdivisions in the Whiskey Creek Greenfield Area that do not meet the performance standards of restricted activity Rule 7A.5.2.1 don't revert to any other rule; a consent would either be granted with conditions to address the effects in line with the performance standards and assessment criteria, or declined. The policy framework provides a clear expectation that subdivision of land affected by natural hazards will be controlled and "any necessary mitigation measures are in place prior to development" (Chapter 7A, Policy 3.1). Policy 4.1 promotes establishment of stormwater management measures in advance of development.

25. I note that in Performance Standard (f)(i) in the new standard proposed by PNCC's reporting planner, there is a requirement that the Stormwater Management Plan meet general requirements of the Engineering Standards for Land Development. I see in s6.1.1 there is a need to ensure that downstream impacts are less than minor, and in proposed Chapter 7A Policy 2.8 to ensure any more than adverse minor adverse effects on the Lower Manawatu Drainage Scheme from subdivision are avoided. I would assess any increase in volume of discharge into the Manawatu Drainage Scheme will have more than minor effects given the level of cumulative effects that have resulted from existing development.
26. I also note that the new Performance Standard (g) proposed by PNCC's reporting planner is focused on the modelling and information that must be undertaken to demonstrate the level of effects. However this does not include a clearly articulated standard for flood management that must be met before consent to develop can be granted, to give effect to the first and second bullet point of proposed Chapter 7A Policy 2.8. If there is no clear standard that will prevent additional discharges to occur, and assessment of potential effects is undertaken when development is proposed, then I consider that it is extremely unlikely Horizons Catchment Operations would be able to support any such application for development. I would like to request that Proposed Chapter 7A Policy 2.8 (Stormwater and flooding, first bullet point) be amended to direct that adverse effects on the Scheme must be avoided, deleting 'any more than minor'.
27. There is an associated proposed assessment criteria (R7A.5.2.3 (d)(i)) which may also need to be amended for consistency as it currently states "The extent to which the design and layout avoids, remedies or mitigates adverse effects on the Lower Manawatū Drainage Scheme", by deleting 'remedies or mitigates'. I note that this should refer to 'Manawatu Drainage Scheme', not 'Lower', and request that this be corrected.
28. I would also like to request that Proposed Performance Standard R7A.5.2.1(g) be amended to include a specific standard that will prevent any new or increase in flood hazard on any other property, and avoid any impact on the Manawatu Drainage Scheme. I suggest it may be possible to do this by inserting the following wording (or other wording that achieves the same outcome) before i. to xv., to set the standard that the information and modelling required would need to demonstrate:  

"The proposal will not cause or exacerbate flooding on any other property and avoid causing any adverse effect on the Manawatu Drainage Scheme. The following must be provided to demonstrate this:"

**CONCLUSION**

29. I believe that the requestor has demonstrated that it is possible to develop the land subject to this plan change, in such a way as not to create or exacerbate flood risk to any properties. It is for this reason that I can support the Plan Change subject to conditions to ensure that this outcome is achieved. I generally support the proposals in Mr Asgar's S42A report, subject to the amendments below or any further, additional or consequential changes that would achieve the outcomes Horizons Catchment Operations Group is seeking:

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- Proposed Chapter 7A Policy 2.8 (Stormwater and flooding, first bullet point) be amended to direct that adverse effects on the Scheme must be avoided, deleting 'any more than minor'.
- Proposed assessment criteria (R7A.5.2.3 (d)(i) be amended for consistency as it currently states "The extent to which the design and layout avoids, remedies or mitigates adverse effects on the Lower Manawatū Drainage Scheme", by deleting 'remedies or mitigates'. This should refer to 'Manawatu Drainage Scheme', not 'Lower', and I request that this be corrected.
- Proposed Performance Standard R7A.5.2.1(g) be amended to include a specific standard that will prevent any new or increase in flood hazard on any other property, and avoid any impact on the Manawatu Drainage Scheme. I suggest it may be possible to do this by inserting the following wording (or other wording that achieves the same outcome) before i. to xv., to set the standard that the information and modelling required would need to demonstrate:

"The proposal will not cause or exacerbate flooding on any other property and avoid causing any adverse effect on the Manawatu Drainage Scheme. The following must be provided to demonstrate this:"



**Jonathon Bell**  
**25 May 2022**