

**Before the Hearings Panel
At Porirua City Council**

Under Schedule 1 of the Resource Management Act 1991

In the matter of the Proposed Porirua District Plan

Between **Various**

Submitters

And **Porirua City Council**

Respondent

**Statement of supplementary planning evidence - Torrey James McDonnell on
behalf of Porirua City Council**

Date: 1 December 2021

INTRODUCTION:

- 1 My full name is Torrey James McDonnell. I am employed as a Principal Policy Planner for Porirua City Council.
- 2 I have read the further evidence and statements provided by submitters relevant to the Section 42A Report – Natural Hazards and the Section 42A Report – Coastal Environment.
- 3 I have prepared this statement of evidence on behalf of the Porirua City Council (**Council**) in respect of technical related matters arising from the submissions and further submissions on the Proposed Porirua District Plan (**PDP**).
- 4 Specifically, this statement of evidence relates to the matters in the above Section 42A Report – Natural Hazards.
- 5 I am authorised to provide this evidence on behalf of the Council.

QUALIFICATIONS, EXPERIENCE AND CODE OF CONDUCT

- 6 Appendix D of the Section 42A Report – Part B Natural Hazards sets out my qualifications and experience.
- 7 I confirm that I am continuing to abide by the Code of Conduct for Expert Witnesses set out in the Environment Court's Practice Note 2014.

SCOPE OF EVIDENCE

- 8 My statement of evidence addresses specific matters raised by submitters through expert evidence or submitter statements including:
- 9 I acknowledge that there are a range of matters in contention as outlined in expert evidence and statements from submitters. However, apart

from what is outlined in this statement, there is nothing further I wish to add in addition to my analysis in the s42A report for these matters.

Kāinga Ora's evidence

10 Kāinga Ora has submitted expert planning evidence from Karen Williams and Brendon Liggett.

11 On the issue of incorporating flood maps into the PDP, I have not changed my position in regard to my recommendations in section 3.5 of the Section 42A Report as a result of Kāinga Ora's evidence. However, there is one point I would like to briefly respond to in advance of the hearing to assist the Panel.

12 Mr Liggett and Ms Williams cite the Auckland Unitary Plan (AUP), and the current Tauranga City Council Plan Change 27 as examples of a trend of councils moving away from incorporating flood maps into plans.

13 I have reviewed the July 2016 decision from the Independent Hearings Panel on the AUP¹. The Panel's decision states that the maps developed by the Council were not fit for purpose for inclusion in the AUP:

Maps that have regulatory effect should be sufficiently accurate for their purpose and should not place a burden on landowners and applicants to disprove that the map is correct.

The mapping of urban areas subject to flooding was acknowledged by the Council to be problematic.

¹ Auckland Unitary Plan Independent Hearings Panel (July 2016) Report to Auckland Council, Hearing topics 022 Natural hazards and flooding and 026 General - others,

The Council withdrew the flood sensitive layer and associated objectives, policies and rules during the hearing. The Panel supports this and recommends that these provisions be deleted.

- 14 Further, the decision notes that a later plan change would be desirable to address the lack of flood mapping in the plan:

The Panel considers it would be desirable for the Council to review its approach to mapping flood hazards but any changes will require separate plan processes.

- 15 It therefore seems that this situation differs from the situation in Porirua in that the AUP natural hazards provisions were not supported by a sufficient evidence base for incorporating flood mapping into the AUP. As Ms Williams acknowledges in her evidence, the modelling undertaken by Wellington Water for Porirua is comprehensive and based on the best information available.

- 16 I have also reviewed Tauranga's proposed approach to flood mapping through Plan Change 27, which is the subject of a hearing taking place this week. This Plan Change is linked to flood maps that sit outside the plan on a GIS viewer that will be regularly updated. The reason why the maps sit outside the plan is that the Council considers their maps will quickly become out-of-date with changes in hydrology due to a rapid rate of urban growth. Keeping these maps outside the plan allows them to be changed more frequently without a Schedule 1 process. This reasoning is similar to that given by Mr Liggett and Ms Williams for excluding maps from the PDP. Unlike the Auckland example, Tauranga has very comprehensive flood mapping similar to that produced for us by Wellington Water.

- 17 However, as Plan Change 27 is the middle of hearings, I consider that this approach has not been subject to sufficient testing to be relied upon as an example of best practice. There are also a very large number of

submitters seeking changes, Plan Change 27 has 1,002 submitters² which is significantly more than Porirua's Natural Hazards Chapter.

- 18 As noted in section 3.5 of the Section 42 Report, similar to Tauranga City Council, Wellington Water's catchment stormwater modelling team maintains a live model that is periodically updated with changes in catchment hydrology. This live model is used to inform building consents as well as resource consents (under sections 104 and 106). I consider that these mechanisms will provide the flexibility to incorporate up-to-date data into consenting processes for catchments that will be undergoing significant change, such as the regeneration project in Eastern Porirua.

Kenepuru Limited Partnership's evidence

- 19 David Sullivan provided evidence on behalf of Kenepuru Limited Partnership in response to Council's expert evidence from Dr Nicola Litchfield from GNS Science. Mr Sullivan's evidence outlines the areas in which the delineation of the Ohariu Fault Rupture Zone through Kenepuru Landing remains in contention.
- 20 In Minute 11, the Panel indicated that it would be assisted by expert conferencing in relation to this matter.
- 21 Dr Litchfield and Mr Sullivan undertook expert conferencing on 26 November 2021. The conferencing included Mr Sullivan's Wellington based colleague Nick Clendon (Principal Engineering Geologist – Tetra Tech Coffey).
- 22 The conferencing was facilitated by Stewart McKenzie (Manager Environment and City Planning at PCC). Chris Worts (Paleoseismology

² Section 42A Report for Plan Change 27 - Flooding from Intense Rainfall (Hearing 30 November to 3 December 2021)

Team Leader / Business Partnerships, GNS Science) and I attended as observers.

23 The experts produced a joint witness statement dated 1 December 2021, which is appended to this statement and is also available on the Hearings Portal. There are a range of matters that the experts agree on and two that they do not. Overall, they agree on a small decrease in the Fault Rupture Zone from the version put forward by Dr Litchfield in her evidence.

24 I will include a complete and final set of recommended fault hazard maps through Council's Right of Reply following the hearing.

Heriot Drive Ltd and Raiha Properties Ltd evidence

25 Rodney Witte has produced evidence for both of these submitters in relation to the Ohariu Fault and associated provisions. I note that while Mr Witte is an experienced planner, he acknowledges that his evidence is not independent due to a financial interest in these properties.

26 Mr Witte raises some points I would like to address, including some that have made me reconsider my recommendations to the Panel in regard to the wording of provisions of the PDP.

27 Mr Witte raises concerns³ with how the submitters' submission points were accepted, accepted in part, or rejected. I used "accepted in part" where I largely agree with the sentiment of the submission point but not necessarily with the full extent of relief sought. For example, in relation to 157.7-157.11 I recommended that these submission points be "accepted in part" as I agreed that changes should be made to the mapping in relation to the Ohariu Fault; however, I did not agree with

³ Paragraphs 9 to 12 of his evidence

the reassessment sought by the submitter of the “High” risk rating of the Ohariu Fault Rupture Zone.

- 28 There was however one error in the Section 42A report, Appendix B has an error in the final column for 157.7-157.11 which should read “yes” for amendments. I recommended that these submission points be accepted in part and the maps be amended in relation to the Ohariu Fault (as outlined above).
- 29 Mr Witte raises issues with the relative assessment rankings of hazard risk areas based on their recurrence period. I would like to elaborate on this matter to assist the Panel.
- 30 As outlined in section 8 of the Natural Hazards section 32 report, hazard risk was determined by a range of regulations and guidance including the New Zealand Coastal Policy Statement (NZCPS) and MfE’s 2003 active faults guidance⁴. The PDP’s approach to hazard risk ratings was tested widely with experts, planners from other councils in the region, and wider stakeholders through the Draft District Plan prior to notification.
- 31 It is also important to note that hazard risk is a product of both consequence and probability, not just probability alone.
- 32 For example, Ohariu fault has an estimated recurrence interval of >2,000 to <3,500 years. MfE’s 2003 active fault guidance is to apply non-complying activity rules to most development on a fault with this class of recurrence interval due to the substantial life-safety risk they pose. As such a high hazard rating was considered appropriate. Other faults in Porirua have longer recurrence intervals. The Pukerua Fault has a recurrence period of >3,500 to <5,000 years while the Moonshine Fault

⁴ Ministry for the Environment (2003) Planning for development of land on or close to active faults: A guideline to assist resource management planners in New Zealand

is >5,000 to <10,000 years. The 2003 guidance suggests a lower regulatory bar for faults with these recurrence intervals.

33 However, with coastal hazards, NZCPS guidance is to take an avoidance approach for a 1 in 100 year event. Therefore a 1 in 100 year tsunami, coastal erosion or inundation event was categorized as a high hazard risk. While 1 in 500 and 1 in 1000 year tsunami events have a more frequent probability than Porirua's fault hazards, they were given a lower hazard risk rating due to their lower consequence in terms of life safety risk. As Mr Witte acknowledges, there is often warning of a tsunami which can reduce the risk to life safety. Further, there are more mitigation options available to reduce the consequences of tsunami hazards than fault hazards. These include raised building platforms or providing for vertical evacuation.

34 I agree with Mr Witte that recovery from either a large tsunami or a fault rupture event would be significant from both a social and economic perspective. New Zealand's building code is designed to reduce the risk to life, and not necessarily for reuse of buildings after an event.

35 Mr Witte raises some issues with terminology relating to fault hazards. I agree that the term 'Fault Rupture Zone' is used inconsistently in PDP for example:

- Planning map legend: this is labelled as a 'Fault Rupture Zone', but it should more accurately be labelled 'Fault Avoidance Zone'. This is the area mapped in pink in the planning maps and varies from 60m to 800m.
- NH-R6: this rule as recommended in Appendix A of the Section 42A report has several errors. The wording of the rule confuses Fault Rupture Zones with Fault Avoidance Zones. The recommended advice note also refers to a 'fault line', this should more accurately read 20m either side of a Fault Rupture Zone. The term 'fault line' should not be used, as depending on the

complexity of the fault, the fault may be either a narrow and well-defined fault line or a wider area of distributed deformation.

36 I recommend that NH-R6 be amended as follows:

NH-R6	Any Hazard-Sensitive Activity and Potentially-Hazard-Sensitive Activity and associated buildings in Low Hazard Areas in a Natural Hazard Overlay
All zones	<p>1. Activity status: Restricted discretionary</p> <p>Where:</p> <ol style="list-style-type: none">Any buildings within a Flood Hazard - Ponding Inundation⁵ Overlay are located above the 1:100 year flood level, where this level is below the bottom of⁶ the floor joists or the base of the concrete floor slab; orAny buildings and activities are located within the Pukerua Fault Avoidance Rupture Zone or the Ohariu Fault Avoidance Rupture Zone are located no closer than 20m from either fault Fault Rupture Zone; side of either orAny buildings and activities within the Moonshine Fault Avoidance Rupture Zone are located within 20m of either side of the Moonshine Fault Rupture Zone.⁷ <p>Matters of discretion are restricted to:</p> <ol style="list-style-type: none">The matters in NH-P4. <p>Notification:</p> <p>An application under this rule is precluded from being publicly notified in accordance with section 95B of the RMA.</p> <p>Note: To avoid doubt, once the Moonshine Fault Rupture Zone is located through site-specific investigation, there are areas within the mapped Moonshine Fault Avoidance Rupture Zone that will be outside of 20m of either side of the Fault Rupture Zone Line. These areas are not a Low Hazard Area and are therefore not subject to the Natural</p>

⁵ Paul and Julia Botha [118.12]

⁶ Kāinga Ora [81.421]

⁷ Porirua City Council [11.36]

	<u>Hazard chapter rules (unless affected by another hazard such as a Flood Hazard).⁸</u>
All zones	<p>2. Activity status: Discretionary</p> <p>Where:</p> <p style="padding-left: 20px;">a. Compliance is not achieved with NH-R6-1.a.</p> <p>Notification: An application under this rule is precluded from being publicly notified in accordance with section 95A of the RMA.</p>

37 I disagree with Mr Witte’s proposal for the Ohariu Fault to be shown as a single fault line⁹. Mr Witte has plotted a 20m setback on either side of the Ohariu “fault line” that appears as a dashed line on Council’s GIS viewer. I have discussed this with Dr Litchfield, who advises that this is only an approximate centre line for the Fault Avoidance Zone and should not be used for planning purposes. GNS’s preference would be for councils to not display these indicative lines on public GIS viewers as they can cause confusion¹⁰.

38 Mr Witte makes another point in relation to the recommended addition to APP10: “buildings and structures that do not have habitable rooms or are used for commercial purposes”¹¹. This should read as “buildings and structures that do not have habitable rooms and are not used for commercial purposes”. This was a typographical error; the intention is for buildings used for commercial purposes to be classified as a Potentially-Hazard-Sensitive Activity.

⁸ Ibid

⁹ Paragraph 27 of his evidence

¹⁰ Council’s GIS team has now removed this dashed line from the online viewer in line with this advice from GNS

¹¹ Paragraph 33 of his evidence

APP10-Table 2 Hazard sensitivity	
Hazard provisions sensitivity classification	Land use activities
Hazard-Sensitive Activities	Childcare services Community facilities activity ¹² Educational facilities facility ¹³ Emergency service facilities Healthcare activity Hospital Marae Multi-unit housing Places of worship Residential units and minor residential units (including those associated with Papakāinga ¹⁴) Retirement villages ¹⁵ Visitor accommodation
Potentially-Hazard-Sensitive Activities	Buildings associated with primary production (excluding residential units, minor residential units, residential activities or buildings identified as Less-Hazard-Sensitive Activities) Commercial activity commercial service activity Community corrections activity Entertainment facilities facility ¹⁶ Food and beverage activity Industrial activity activities ¹⁷ Integrated retail activity ¹⁸ Large format retail activity Major sports facilities; facility ¹⁹ Offices Retail activity activities ²⁰ Retirement village ²¹ Rural industry
Less-Hazard-Sensitive Activities	Accessory buildings used for non-habitable purposes ²²

¹² Minor correction under Clause 16 (to align with the National Planning Standards definition of 'Community Facility')

¹³ Minor correction under Clause 16 (should be plural for consistency)

¹⁴ Minor correction under Clause 16 (incorrect spelling of Papakāinga)

¹⁵ Minor correction under Clause 16 (should be plural for consistency)

¹⁶ Minor correction under Clause 16 (should be plural for consistency)

¹⁷ Minor correction under Clause 16 (should be singular for consistency)

¹⁸ Minor correction under Clause 16 (is a subset of large format retail activity, and is not in list under definition of 'Potentially-hazard-sensitive activities')

¹⁹ Minor correction under Clause 16 (should be plural for consistency)

²⁰ Minor correction under Clause 16 (should be singular for consistency)

²¹ Kimberley Vermey [50.1]

²² Kimberley Vermey [50.2]

Boating facilities (above MHS)
Buildings and structures that do not have habitable rooms ~~or~~ and are not used for commercial purposes²³
Parks facilities
Parks furniture
Buildings associated with temporary activities

40 Mr Witte makes several other detailed points in relation to the drafting of policies, rules and definitions that were not made in the submitters' original submission. There are therefore potentially scope issues with what he is seeking. I am however happy to answer any questions from the Panel in relation to these more detailed comments.

Flood modelling

41 In section 3.8 of the Section 42A report, I recommend that the flood hazard maps be amended in line with the expert evidence from Nadia Nitsche. I indicated that Wellington Water is undertaking additional mapping work to create maps for inclusion in the PDP.

42 Nadia Nitsche has now undertaken this further modelling in relation to submissions from Paul and Julia Botha's²⁴ and Kenepuru Limited

²³ Kimberley Vermey [50.2]

²⁴ Paul and Julia Botha [118.12]

Partnership²⁵.



Figure 1: Map provided by Paul and Julia Botha [118.12] showing correct culvert location in relation to their property



Figure 2: Updated flood modelling in response to the submission from Paul and Julia Botha [118.12] (yellow is Flood Hazard - Stream Corridor, and blue is Flood Hazard - Ponding)

²⁵ Kenepuru Limited Partnership [59.29, 59.30]



Figure 3: Updated flood modelling in response to the submission from Kenepuru Limited Partnership [59.29, 59.30] (yellow is Flood Hazard - Stream Corridor, and blue is Flood Hazard - Ponding)

43 I would like to signal to the Panel that I will include a complete and final set of recommended flood hazard maps, including the above amendments, through Council's Right of Reply following the hearing.

Minor errors in Section 42A Report

44 Footnote 7 on page 21 of the report should read:

Wellington Water GNS Science will need to undertake some additional mapping work to finalise amended maps for inclusion in the PDP. These will be provided to the Panel either through supplementary evidence or in Council's right of reply.

45 Footnote 60 on page 9 of Appendix A should read: “Paul and Julia Botha
[118.12]”

Date: 1/12/2021

A handwritten signature in blue ink, appearing to read 'W. Donald', is positioned above a horizontal dotted line.