

## Submission Form - RMA Form 5

This submission form should be used for making a submission on Variation 1 to the Proposed Porirua District Plan and/or Plan Change 19 to the Operative District Plan (in accordance with Clause 6 of the First Schedule, Resource Management Act 1991)

**To:** Porirua City Council  
**Email to:** [dpreview@porirua.govt.nz](mailto:dpreview@porirua.govt.nz)  
**Subject:** Submission on Variation 1 and/or Plan Change 19  
**Post:** Environment and City Planning, Porirua City Council, PO Box 50-218, PORIRUA CITY  
**Delivery:** Ground Floor, Council Administration Building, Cobham Court, Porirua City, marked "Attention: Environment & City Planning Team"

**Closing date for submissions is 5pm Monday 12 September 2022**

**If you are making an online submission, you do not need to complete the fields that are blocked out with grey as the online portal will pick up those details.**

**Note to person making a submission**

Please note that your submission (or part of your submission) may be struck out if the authority is satisfied that at least 1 of the following applies to the submission (or part of the submission):

- it is frivolous or vexatious;
- it discloses no reasonable or relevant case;
- it would be an abuse of the hearing process to allow the submission (or the part) to be taken further;
- it contains offensive language; and/or
- it is supported only by material that purports to be independent expert evidence, but has been prepared by a person who is not independent or who does not have sufficient specialised knowledge or skill to give expert advice on the matter.

**Privacy note:**

When a person or group makes a submission or further submission on Variation 1 to the Proposed District Plan or Plan Change 19 this is public information. Please note that by making a submission your personal details, including your name and addresses will be made publicly available under the Resource Management Act 1991. This is because, under the Act, any further submission supporting or opposing your submission must be forwarded to you as well as to PCC. There are limited circumstances when your submission or your contact details can be kept confidential. If you consider you have reasons why your submission or your contact details should be kept confidential please contact the Environment & City Planning Team at [dpreview@porirua.govt.nz](mailto:dpreview@porirua.govt.nz).

**Signature** of person making submission  
(or person authorised to sign on behalf of person making submission)

...  .....

(A signature is not required if you make your submission by electronic means.)

**Date** ...12/09/2022.....

## Submission Table

- We recommend using this submission table to state your submission points. This will assist Council to accurately record your submission points.
- Each individual submission point should be on a different row. Use as many rows as you require.
- You can attach additional commentary and documents should you need to.
- The examples in italics below are for guidance only to show how submission points could be set out and do not represent a position of Council.

<b>Specific part/provision</b> State the specific part or provision of proposed Variation 1 or Plan Change 19 that your submission relates to	<b>Support? Oppose? Amend?</b> choose one of the above	<b>Relief sought</b> What decision are you seeking from the Council? What action would you like: Retain? Amend? Add? Delete?	<b>Reasons</b> Include reason(s) for your submission point
<p>Planning Maps Hazards and Risks Overlays Fault Rupture Zone Overlay</p>	<p>Amend</p>	<p>Include areas of well defined, distributed, and uncertain (if appropriate) fault rupture within the Fault Rupture Zone Overlay in the Planning Maps.</p> <p>If the Fault Rupture Zone Overlay contains areas of low, medium and high hazard ranking, add these hazard ranking zones to the Planning Maps.</p>	<p>The Ohariu Fault passes through an area which has been rezoned for high density residential development, and the Hospital Zone. It is unclear from the proposed planning map where and how development is restricted to limit the risk posed by the fault.</p> <p>Fault Avoidance Zones are recommended by MfE<sup>1</sup> guidelines on planning around active faults. These zones should avoid development with 20 m of an active fault and should include any areas of uncertainty and distributed fault rupture. In accordance with the MfE guidelines, we recommend that defined, distributed, and uncertain zones should be mapped to show the uncertainties and where further investigations may be required.</p> <p>The Ohariu Fault Hazard Overlay needs to be clarified or amended to reflect the rules which are in place within this overlay. In particular, the operative plan has differing restrictions for subdivision, building and infrastructure within low, medium and high hazard zones. It is noted in the Section 32 (2020) report that the Ohariu Fault Hazard Overlay has low, medium and high hazard zones within it, with the highest restriction being within 20 m of the fault. However in the Proposed Planning Map active faults are only depicted as a single Fault Rupture Zone of varying width, and supporting documents are not available to explain why the overlay has been mapped like this.</p> <p>If the width of the Fault Rupture Zone within the High Density Residential Zone represents a 20 m exclusion zone around a wide, distributed or unconstrained part of the Ohariu Fault, then residential development and sensitive activities – including hospitals - should be avoided within this area. If, however, the Fault Rupture Zone contains varying levels of hazard and restriction, and the Ohariu Fault is well-constrained and discrete in this area, then these zones should be presented in the planning maps to avoid confusion.</p>

<sup>1</sup> <https://environment.govt.nz/assets/Publications/Files/planning-development-faults-graphics-dec04-1.pdf>

			We were unable to access the GNS Science Report XXX as referenced in the s32 report, and as a result we could not confirm the approach taken.
Planning Maps – Natural Hazard Overlay	Amend	A regulatory Liquefaction hazard overlay, such as that available from the Greater Wellington Regional Council should be included in the planning maps with restrictions on development implemented in high-risk areas.	Some areas of Porirua are at high risk of liquefaction in the event of an earthquake, which can be seen in the Greater Wellington Regional Council Liquefaction Hazard Map <sup>2</sup> . One of these areas overlaps with an area which has been rezoned for high density residential development. Another overlaps with an area which has been rezoned for medium density residential development (see attached appendix – Figure 1). It has been demonstrated that certain building types are more susceptible to damage by liquefaction. Increased floor size, height and an irregular footprint increase the risk of liquefaction damage <sup>3</sup> . Severe liquefaction under the foundations of a building during an earthquake can cause it to become uninhabitable and require complete rebuilding, even if the building does not suffer shaking damage. This leads to deconstruction waste and increased embodied carbon, reconstruction waste and resource, and reduced wellbeing of those waiting for their house to be deconstructed and rebuilt. Buildings of up to 22 m tall are allowed in the High-density Residential Zone, which are at increased risk in a high liquefaction risk area. These higher rise buildings may accommodate many families who then need to be relocated during any deconstruction and reconstruction process. While foundation types as specified in the Building Act can reduce damage from liquefaction, it is important to also reduce risk by appropriate zoning. Property damage and associated disruption to life and wellbeing can be further reduced by avoiding intensification in areas at high risk of liquefaction.
Natural Hazards, Subdivision, Infrastructure	Amend	Include liquefaction hazards in the Natural Hazards section and implement rules in the Natural Hazards, Subdivision, and Infrastructure chapters to restrict development in areas at high risk.	Some areas of Porirua are at high risk of liquefaction in the event of an earthquake, which can be seen in the Greater Wellington Regional Council Liquefaction Hazard Map <sup>2</sup> . One of these areas overlaps with an area which has been rezoned for high density residential development. Another overlaps with an area which has been rezoned for medium density residential development (see attached appendix – Figure 1). It has been demonstrated that certain building types are more susceptible to damage by liquefaction. Increased floor size and height and an irregular footprint increase the risk of liquefaction damage <sup>4</sup> . Severe liquefaction under the foundations of a building during an earthquake can cause it to become uninhabitable and require complete rebuilding, even if the building does not suffer shaking

<sup>2</sup> <https://data-gwrc.opendata.arcgis.com/datasets/9d2074c4bc5b40e1b4352abd1f2e1ebf/explore>

<sup>3</sup> Tonkin & Taylor “Earthquake Loss Modelling, Lower Hutt”, Hutt City Council, 2022

			<p>damage. This leads to deconstruction waste and loss of embedded carbon, reconstruction waste and resource, and reduced wellbeing of those waiting for their house to be deconstructed and rebuilt. Buildings of up to 22 m tall are allowed in the High-density Residential Zone, which are at increased risk in a high liquefaction risk area. These higher rise buildings may accommodate many families who then need to be relocated during any deconstruction and reconstruction process.</p> <p>While foundation types as specified in the Building Act can reduce damage from liquefaction, it is important to also reduce risk by appropriate zoning. Property damage and associated disruption to life and wellbeing can be further reduced by avoiding intensification in areas at high risk of liquefaction.</p> <p>MBIE/MfE guidance is available on including liquefaction in land use planning<sup>5</sup>, and we recommend this is used as a basis for developing policy for development in liquefaction susceptible areas.</p>
Planning Maps – Natural Hazard Overlay	Amend	A regulatory landslide hazards overlay should be developed and included in the planning maps with restrictions on development implemented in high-risk areas. At a property level, this could include providing a policy for the 'line' to be contested, similar to the Slope Instability Management Areas in the Christchurch District Plan.	<p>Porirua is at risk of landslides, due to the high rainfall, earthquake risk, and high density of slopes steeper than 20°. The Porirua Proposed District Plan only considers slope instability in rules for earthworks, restricting earthworks on slopes greater than 34°, and limiting heights of earthworks.</p> <p>Applying a Landslide Hazard overlay and restricting development within high-hazard areas will preclude inconsistent application of earthworks rules and prevent subdivision and development on slopes prone to failure.</p> <p>It is important to take this hazard into account when planning intensification and development projects to reduce the future risk to life, property and wellbeing.</p>
Natural Hazards, Subdivision, Infrastructure	Amend	Include landslide hazards in the Natural Hazards section and implement rules in the Natural Hazards, Subdivision, and Infrastructure chapters to restrict development in areas at high risk.	<p>Porirua is at risk of landslides, due to the high rainfall, earthquake risk, and high density of slopes steeper than 20°. The Porirua Proposed District Plan only considers slope instability in rules for earthworks, restricting earthworks on slopes greater than 34°, and limiting heights of earthworks. This does not consider the effect that underlying soil type, ground water level, and previous earthworks has on the likelihood of slope failure. Applying a Landslide Hazard overlay and restricting development within high-hazard areas will preclude inconsistent application of earthworks rules and prevent subdivision and development on slopes prone to failure.</p> <p>It is important to take this hazard into account when planning intensification and development projects to reduce the future risk to life, property and wellbeing.</p>

<sup>5</sup> <https://www.building.govt.nz/assets/Uploads/building-code-compliance/b-stability/b1-structure/planning-engineering-liquefaction.pdf>

Appendix 1 – Supporting Information

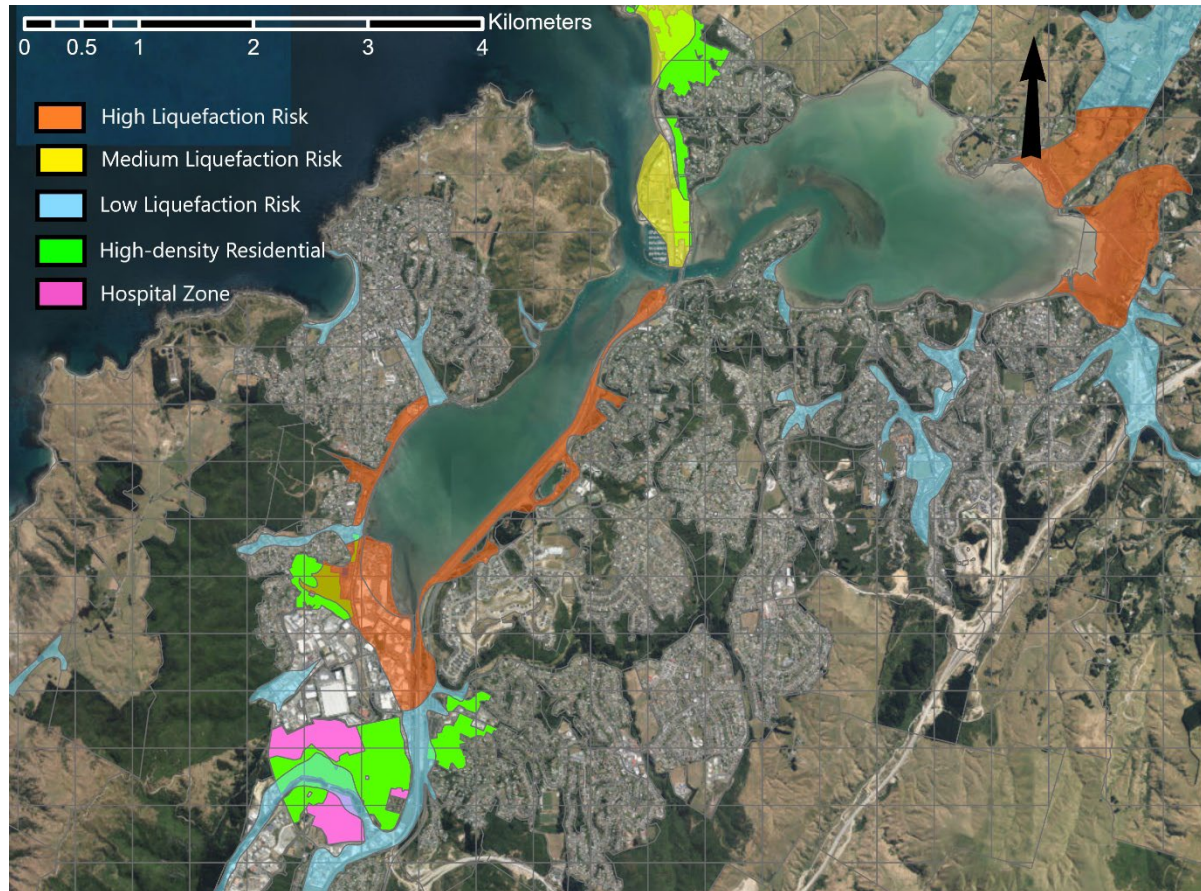


Figure 1. High-density residential (green) and Hospital (pink) zones with overlay of liquefaction prone areas (orange, yellow and blue transparencies) from Greater Wellington Regional Council Liquefaction Hazard Map.