

## By email

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Dear Nathan

### **Greater Wellington Flood Hazard Overlays– Hutt City Council District Plan**

This letter accompanies a package of GIS data containing hazard overlays for the Hutt City Council District Plan. The letter describes the contents of the accompanying files and provides a brief explanation of the process used to create the layers.

Across the Wellington Region we believe there are almost 200,000 people living in flood prone areas. Land-use controls are the most effective and sustainable tool for managing flood and erosion risk. While we recognise the tension between development and natural hazard, we strongly advocate for inclusion of flood hazard information in district plans and the avoidance of development in appropriate places.

#### **Hazard overlays provided**

Greater Wellington is responsible for providing flood hazard information from named rivers and streams in the Water Courses Agreement. For Hutt City these are the Hutt River, Waiwhetū Stream and Wainuiomata River. A summary of the information provided follows.

##### *Hutt River hazard overlays*

Hazard overlays are included for the 2300m<sup>3</sup>/s flood event. This equivalent to the 1% annual exceedance probability (AEP) flood, including an allowance for climate change. The Hutt River modelling includes uncertainties that can be mapped within the model. A 1.59m sea level rise component has been included which reflects the SSP5-8.5 M based relative sea-level rise projection and includes the vertical land movement for Lower Hutt.

Note that the hazard overlays being provided with this letter are considered to be final draft. They have undergone peer reviews but have not had an independent audit completed. The final hazard overlays will be available in mid-2025.

### *Waiwhetū Stream hazard overlays*

Hazard overlays have been provided for the Waiwhetū Stream, and any water that interacts with the Waiwhetū Stream, for the 1% AEP flood including an allowance for climate change. Note that the Waiwhetū modelling includes uncertainties that can be mapped within the model.

Climate change allowances that have been used are:

- *Sea-level rise*: 1.59m sea level rise component. This reflects the SSP5-8.5 M based relative sea-level rise projection and includes the vertical land movement for Lower Hutt.
- *Rainfall*: The RCP 8.5 2101-2120 projection for rainfall with a 6-hour storm

It is understood that Wellington Water are providing stormwater hazard overlays for Eastern Lower Hutt. These are derived from the same model and have a partially overlapping catchment area. It is recommended that the greater hazard in any given location is used for district planning purposes.

These maps are considered to be final. They have been through all peer reviews and the independent audit process.

### *Wainuiomata Stream*

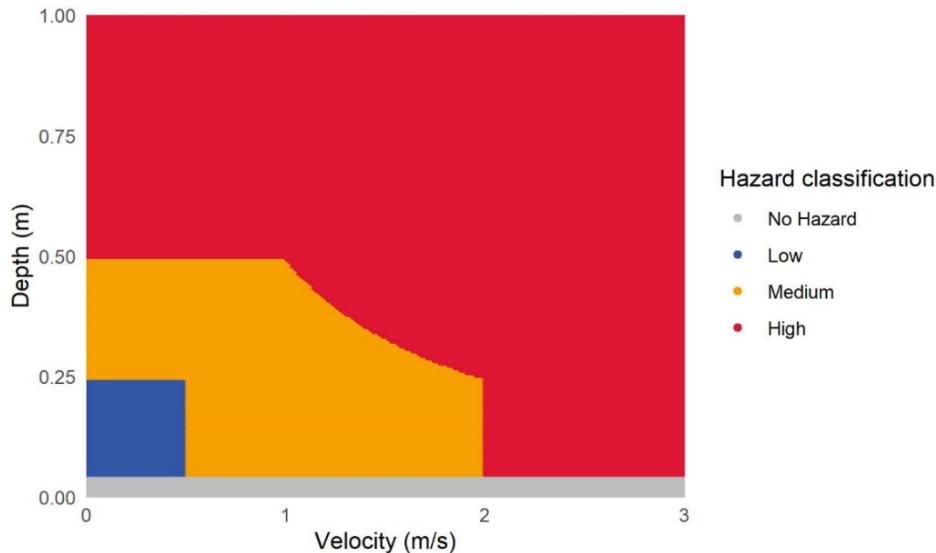
Updated flood hazard modelling has not been completed for the Wainuiomata Stream. It is proposed that the existing district plan flood hazard overlays are used for this area. The flood hazard model will be updated over the next two years and will be made available for incorporation at this point.

### **Hazard categories**

The hazard overlays provided are categorised as high, medium and low hazard. These are calculated as shown in Table 1 and illustrated in Figure 1.

**Table 1: Flood hazard categories**

Hazard Overlay/ Level	Description	Activity restrictions	Modelled flood hazard threshold		
			Depth	Velocity	Depth x Velocity
Low Hazard Inundation Area	Areas of lower velocity and depth	Development within the Inundation (Ponding) Area presents a lower hazard risk, and therefore a permissive level of consenting with fewer rules is appropriate.	0.05m to 0.5m	< 0.5m/s	or < 0.25m <sup>2</sup> /s
Medium Hazard Overland Flowpaths	Areas of lower depth, and moderate velocities	Development within the Overflow Path has more restrictive consenting requirements commensurate with the medium risk.	> 0.25m	> 0.5m/s	or >0.25 m <sup>2</sup> /s
High Hazard River / Stream Corridor	Areas with dangerous flow depths and/or velocities	Development within the Stream/River Corridor should generally be avoided and has more extensive consenting requirements	> 0.5m	> 2m/s	or > 0.5m <sup>2</sup> /s



**Figure 1:** Visual representation of hazard classification

### Supporting information

To support the interpretation of the hazard overlays, background information on hazard planning and flood modelling follows.

#### *Flood Hazard Planning Guidance*

The Flood Hazard Planning Guidance recommends hazard overlays are structured for use in a risk-based planning framework, with low, moderate, and high hazard areas, allowing for flexible activity and land use controls for each zone. Low risk activities have less control in low hazard zones. This guidance was developed in collaboration with planners familiar with the National Planning Standards and both independent and Greater Wellington experience providing input to the development of flood hazard overlays for district plans. The goal of the document is to provide a resource for Territorial Authorities to use for developing an effective risk-based planning framework in line with National Legislation.

#### *Flood Hazard Modelling Standard*

Model areas are derived from classification of the detailed flood hazard modelling investigations produced in line with the Greater Wellington Flood Hazard Modelling Standard (FHMS). The standard outlines a detailed approach with multiple peer reviews and opportunities for community consultation of model results. The models consider realistic scenarios developed in line with Greater Wellington's standard. The model accounts for realistic impacts from factors and uncertainties (such as bridge blockage due to debris), and climate change impacts using the latest available projections. This is in line with our standard and Greater Wellington council policy.

The Flood Hazard Modelling Standard is available [here](#).

## Summary

We trust you find this information and the overlays provided suitable for incorporation into your district planning process. We are working to complete the flood mapping for Hutt River by mid-2025.

Yours sincerely



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Encl:

1. Hutt River Hazard Overlays (Nov 2024)
2. Waiwhetū Stream Hazard Overlays (Nov 2024)
3. Greater Wellington Flood Hazard Planning Guidance – March 2023