#### Quality for Life





# Flood and Erosion Hazard Information Sheet 2

in place. We also want to ensure that inappropriate developments don't create new problems.

**APRIL 2010** 

**Hutt River** 

One of Greater Wellington's key roles is to help communities protect themselves from the effects of natural hazards. To do this, our communities need to understand the risk from natural hazards and have affordable and acceptable management solutions

Identifying hazards, such as those caused by river flooding and erosion, is the responsibility of local and territorial authorities under the Resource Management Act. This information sheet tells you about the flood and erosion hazard work Greater Wellington has undertaken on the Hutt River, what the risks are, and what you can do to manage them.

#### Will this information affect my property value or insurance?

We have been advised by Quotable Value that valuations follow the market rather than set the market. They would not expect to discount a valuation without there being market data to support that approach, and this was not the case from their observations of the market at the time of their valuations. This advice was based on work they have recently undertaken in the Mangaroa Valley which is in a similar situation.

Many areas in the Wellington Region are subject to flood risk. We advise that any known facts relating to the physical risk to a property should be disclosed to an insurer. This includes whether the property is exposed to any particular hazard by virtue of its location (e.g. flood). An insurer requires these facts when evaluating whether or not to underwrite the risk and, if so, on what terms.

### What you can do if you intend to develop, build or renovate

Consider the following actions if you are building or renovating in a flood or erosion-prone area:

- Speak to Hutt City Council (Tel. (04) 570 6666 ask for Environmental Consents) before you start building.
- Avoid the area affected by flood or erosion. No new development should occur beyond the Building Setback Line (refer to Figure 4). Greater Wellington also advises that development avoids flood hazard areas, but if this is not possible, such as for an existing dwelling, we can provide you with site-specific advice.
- Raise your building platform or floor levels, or build to two storeys. The underside of the floor joists or concrete slab should be clear of the 1 in 100 year return period flood level. Remember that the design flood event could be exceeded.
- Consider access issues and provide flood-free evacuation routes. No one wants to be caught in a flood event with no safe escape routes. Elevating access routes is not recommended as these may act as barriers to flood waters.

## What you need to do if you live in this area

Know your risk: Find your property on the flood and erosion hazard map and find out what the predicted depth of water will be. The Hutt Valley Emergency Management Office can give you information about how to reduce the effects of flooding. This information could cover evacuation plans, how to protect items in your home by raising them above floor level, and how you can reduce the risk of future flooding to your home.

Be prepared: You will need to have:

- A Household Emergency Plan that will help you and your household plan for what to do when disaster strikes.
- Emergency Survival Items such as food, water, clothing and medical supplies for you and your family. You will need enough for at least 3 days.
- A Getaway Kit of essential emergency and medical items if you need to be evacuated.

For more information on preparing for an emergency please contact the Hutt Valley Emergency Managment Office T (04) 570 6666

W www.huttcity.govt.nz/Council-Services/ Emergency-Management/

The Hutt River catchment

The Hutt River is a steep alluvial river that starts in the Tararua Ranges and enters Wellington Harbour at Petone. The river drains mountainous terrain in the southern Tararua and Rimutaka Ranges and streams and rivers from the Eastern and Western hills of the Hutt Valley.

The catchment covers 655 km<sup>2</sup> (that's more than seven times the area of Wellington Harbour!) and contains not only the Hutt River but also the Akatarawa, Pakuratahi, Mangaroa, and Whakatiki Rivers. All of these rivers feed into the Hutt River, so a storm in any part of the catchment could result in flooding



Figure 1: Location of the Hutt River (in blue)



#### How we measure floods

The amount of water flowing in a river is measured by a unit called a cumec (cubic metre per second), which is a measure of how much water flows past a given point every second.

Flood frequency is measured by how often a flood of a particular size is likely to happen such as a 1 in 5, 1 in 50 or 1 in 100 year return period flood event. A 100 year return period flood event has a 1% chance of being equalled or exceeded in any year. On average, one of these events could occur every 100 years.

But don't be misled into thinking that a 100 year return period flood can only happen once in a hundred years two big floods could happen soon after each other!

#### Floods on the Hutt River

The Hutt River has a history of flooding. The first European/ Pakeha settlers in the Wellington Region settled around Petone and Lower Hutt in the 1840s. By 1855, after experiencing floods (and earthquakes), many moved to Wellington. A major flood in 1898 covered the entire valley floor. This led to the construction of the first major stopbanks to protect Hutt residents. Some of the original stopbanks are still there today and, although the river is kept on its present course by stopbanks, it can still flood. Around 70,000 people live on the floodplain, and assets worth \$6 billion are at risk. A big flood could cause considerable damage to businesses, services and homes in the Hutt Valley.

Greater Wellington is always available to provide advice, site-specific information and recommendations for individual properties, whether they are for specific development proposals or simply in regard to enquiries from residents or interested parties. So please do not hesitate to contact us on the numbers below.

For more information, contact Flood Protection Department

Greater Wellington Regional Council P O Box 11646 Wellington

T 04 384 5708 www.gw.govt.nz

Sharyn Westlake Flood Protection Department

P: 04 801 1046 F: 04 802 0300

E: Sharyn.westlake@gw.govt.nz

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The six largest flood events measured at Taita Gorge since 1989 are:

Date	Maximum flow (cumecs)	Return period (years)
8 Nov 94	1196	8
4 Oct 97	1251	9
21 Oct 98	1305	10
28 Oct 98	1540	20
2 Oct 00	1253	9
6 Jan 05	1562	25



Figure 2: The Hutt River – Central Business District, October 1998

## Why this information is useful

The hazards associated with flooding and the natural evolution of the floodplain should be considered when new development is being considered on the floodplain. This approach is useful as it helps to:

- minimise the future damage from flood events to property;
- identify any potential threat to life;
- allow evaluation of any impact on the river environment;
  and
- alert people to any potential flood and erosion risk.

#### What it means

The hazard assessment shows areas along the Hutt River that are susceptible to flooding, which includes the effects of inundation and erosion. This information was incorporated into Hutt City Council's District Plan in 2004. Figure 3 shows the Boulcott, Belmont and Stokes Valley areas of the Hutt Valley that are subject to flooding in a 1 in 100 year return period flood event. A typical map is shown in Figure 4. The rest of the Hutt Valley is protected by a flood protection scheme up to a 1 in 440 return period flood event¹.

**100 year flood extent**: is the extent of flooding for a 100 year return period flood event.

**Building set back line:** is the area where the Hutt River could continue to migrate naturally. No development should take place in this area unless specific features could be identified that would mitigate the erosion threat.

# How does Greater Wellington manage the Hutt River?

In 2001, the Hutt River Floodplain Management Plan (HRFMP) was completed by Greater Wellington, the Upper Hutt and Hutt City Councils and Iwi. The communities in the Hutt Valley also played a big part in the process.

Collectively it was decided that the level of flood protection preferred is one that will handle a 2300 cumec flood or a 1 in 440 return period flood event. The HRFMP provides a comprehensive stragtegy to manage the flooding hazard in the Hutt Valley over the next 40 years through a variety of structural and non structural measures.

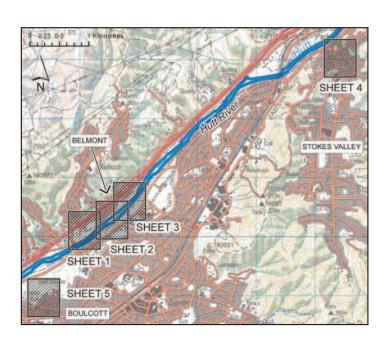
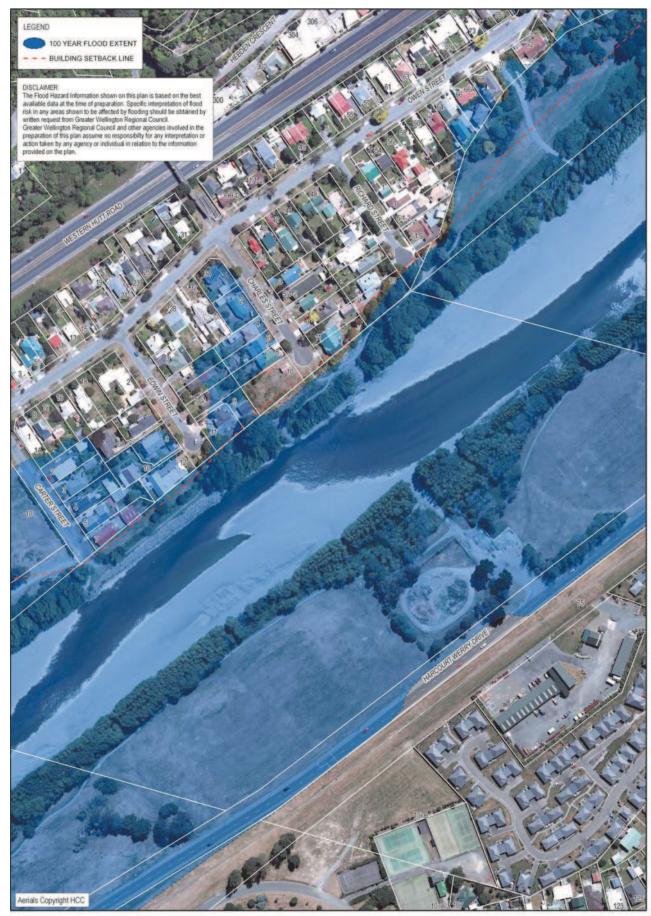


Figure 3: Location map for Figure 4 flood hazard map



<sup>1.</sup> Upon completion of scheme upgrade proposed in the Hutt River Floodplain Management Plan.