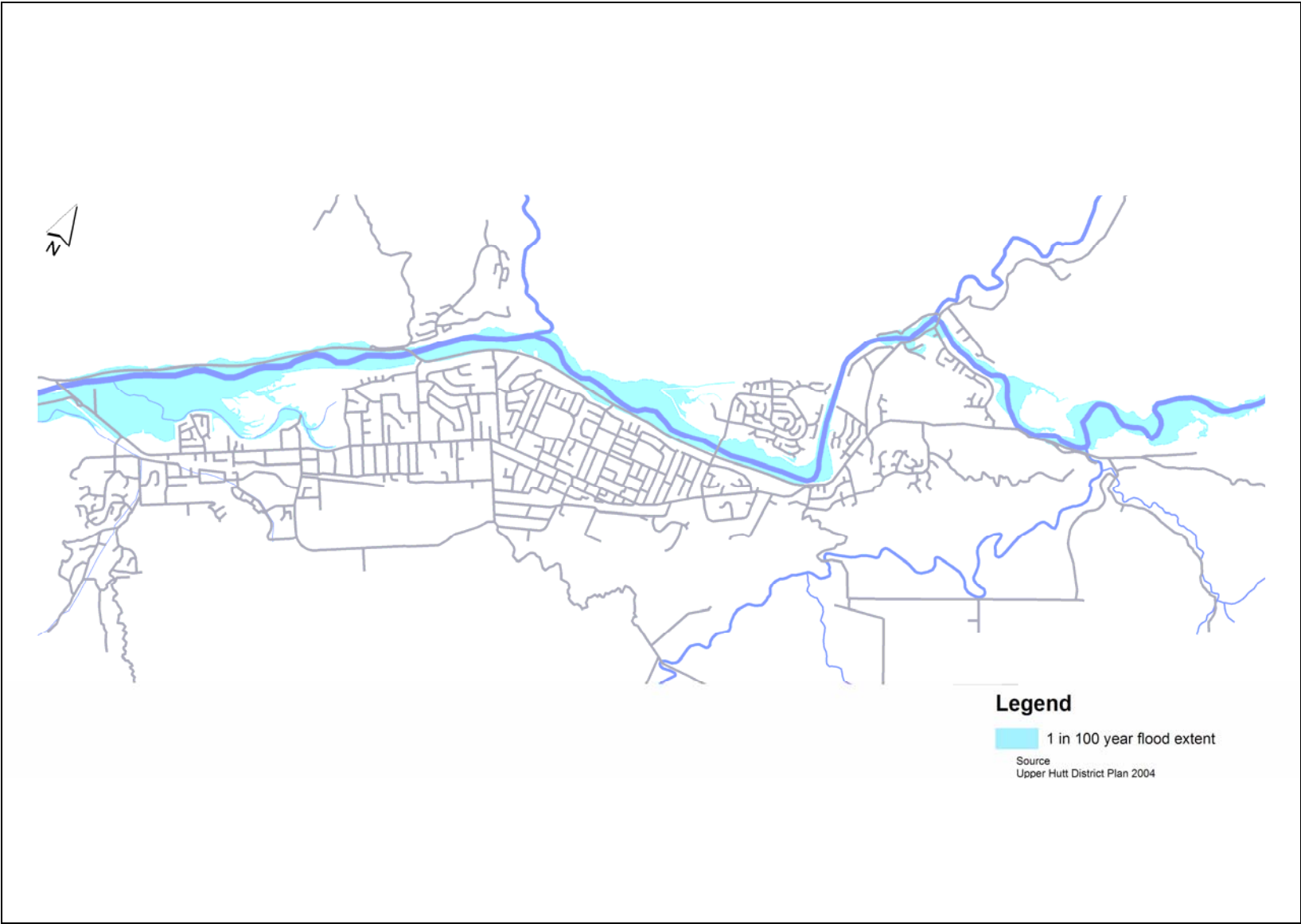




Upper Hutt Urban Growth Strategy

Environmental Constraints

Hutt River 1:100 Year Floodplain



Flooding

Hutt River Floodplain Management

The city is built on the Hutt River floodplain, and over the years, different parts have been subject to flooding. There are two types of flooding hazard as described in the Hutt River Floodplain Management Plan, the primary river corridor hazard area [core flooding area and parts subject to erosion], and the secondary river corridor hazard area [ponding areas]. They differ in that the primary area is subject to much faster flows of water which have much greater potential to cause significant erosion and damage. Significant damage may still be incurred from ponded water.

The Hutt River Floodplain Management Plan, completed in 2001 by the Greater Wellington Regional Council, identifies a number of structural and non-structural measures for reducing flood risk. In summary, the following specific measures are proposed by the Regional Council for physical works over the next 40 years:

- Major stopbanks to the 2800 cumec standard [rare flood event] and associated edge protection to 2300 cumec [1 in 440-year flood event]
- Whirinaki Crescent stopbank to the 2300 cumec standard
- Bridge Road edge protection to the 1900 cumec standard [1 in 100-year flood event], plus assistance for house raising to 1900 cumec level
- Gemstone Drive stopbank and edge protection to the 1900 cumec standard, plus floodwall to 1900 cumec standard or assistance with raising house to 1900 cumec level
- Totara Park stopbank to the 2300 cumec standard

The Regional Council has stated that locally affected communities will be involved with these investigations, providing feedback on design detail, associated environmental enhancements, and the effects of the structural works. This is already happening in the case of the Whirinaki Stopbank.

The non-structural land use planning measures that the City Council proposes to take to improve the community's resilience through changes to the District Plan include:

- Location of habitable buildings, buildings associated with community resilience, and accessory buildings and ancillary structures
- Subdivision
- Earthworks
- Hazardous substances
- Critical facilities [healthcare and emergency services]
- Critical facilities [key network facilities]
- New and upgraded bridges
- Information on property titles

The map on page 88 shows the 1 in 100 year Hutt River Floodplain.

Other Rivers and Streams

Two further waterways have also been prioritised for investigation by the Regional Council.

The Mangaroa River Flood Hazard Assessment has been released by the Regional Council, and City Council staff are considering how best to respond to the new information. It is likely that the changes required to be made to the District Plan for the Hutt River will be sufficiently broad to address flooding issues relating to urban areas in this catchment.

A study of the Pinehaven Stream catchment is scheduled to be undertaken over the 2008/10 years by both Councils. It will identify possible options to mitigate the flood risks from this stream.

Seismic Hazard

Faultlines – Surface Fault Rupture

The Upper Hutt City District Plan identifies the position of the main Wellington Faultline. Through the urban valley floor, this faultline follows the general alignment of the Hutt River, cutting through Totara Park along the northern length of California Drive, through Harcourt Park and Emerald Hill to the northern edge of the Twin Lakes.

A more detailed study of the faultlines in Upper Hutt was undertaken by the Institute of Geological and Nuclear Science in 2006. This study revealed a more accurate positioning of the Wellington Faultline through the urban valley floor, as well as information on additional faultlines – Whitemans Valley Fault, Akatarawa Fault, Moonshine Fault and the Otaki Forks Fault. The study identifies which stretches of faultline are well defined, and which are less certain, as well as an assessment of the likely recurrence and strength of any surface rupture event.

As a result of this study, the Council will review its existing provisions in the District Plan relating to Fault Band Hazards to incorporate information from this study and the 2003 Ministry for the Environment report on 'Planning for Development of Land On or Close to Active Faults'. This report defines five categories of building importance and recommends on their positioning in relation to different classes of fault.

The District Plan Planning Maps will also be revised to reflect the new information on the location of the faultlines.

Other responses that the Council is taking to improve the resilience of the city's critical infrastructure are identified in the Long Term Council Community Plan 2006-16 and include the seismic upgrade of Silverstream Bridge, work which has now been completed, and works associated with the Lifelines project.

Ground Shaking, Liquefaction and Risk of Slope Failure

The Greater Wellington Regional Council has prepared a map showing the risks arising from aspects of seismic activity – ground shaking, liquefaction and the risk of slope failure. These three aspects have been combined to create a Combined Seismic Hazard Map, illustrated on the page 85.

The combined hazards map shows that much of the urban valley floor is subject to a medium risk, and a number of areas feature low or very low risks. Small areas of high risk are identified which are generally associated with a high or very high risk of slope failure, and most of these localities are outside the urban area.

Where land is subject to a moderate to high seismic risk, the Council may require additional work be undertaken to assess the possible effects of the risk, and ways to mitigate its possible impact. A plan change will be introduced, together with appropriate updating of the Planning Maps.



Harcourt Park

Slope Instability

Land which is prone to erosion is identified as having a gradient of 28 degrees or more, or within 10 metres of such land.

Currently, the District Plan requires resource consent be sought to undertake earthworks on erosion prone land. As land values are increasing, there is increasing pressure to develop this land for urban purposes. Some of it is already zoned for residential purposes, and more of this land has been identified within areas of greenfield development.

Council proposes to introduce a change to the residential provisions by reviewing the District Plan standards in the vicinity of erosion prone land. The area zoned as Residential Hill will be reviewed and strengthened provisions will be introduced to deal with earthworks, access and roading, vegetation clearance, forestry, building location and stormwater management in order to minimise risks to life and property from erosion. These risk factors will be assessed alongside other factors, such as for amenity, landscape and biodiversity values.

Fire

Fire is another hazard facing any community. Almost the entire urban valley floor is served by the NZ Fire Service. However, more recently developed housing on the urban fringe [e.g Sylvan Heights, Riverstone Terraces, Mt Marua] is within the Upper Hutt Rural Fire District and serviced by the Upper Hutt City Council's Rural Fire Service.

Council will continue to advocate for the NZ Fire Service to assume responsibility for the new greenfield residential areas.

Council will encourage homeowners to create a 'defensible area' of up to 20 metres around their homes in order to minimise the risk of fire damage.

Council proposes to review the District Plan provisions for those hill areas on the urban fringe that are at greater risk of scrub fire. This will include a

review of provisions for yards, vegetation clearance, access, water supply, and the location of habitable buildings on site to enable defensible spaces to be created.

Site Contamination

Contaminated sites are defined in the Regional Plan for Discharges to Land for the Wellington Region as 'sites at which hazardous substances occur at concentrations above background levels, and where assessment indicates it poses or is likely to pose an immediate or long term hazard to human health or the environment'. Examples of sites which may be contaminated include railway yards, and land used for petrol storage, sheep dips or treatment of timber.

The Greater Wellington Regional Council maintains a database of contaminated and potentially contaminated sites, the Selected Land Use Register. The City Council liaises with the Regional Council when any land use application is received on such sites, and provides any known information when Land Information Memoranda are issued.

Implementation Summary

ACTION	AGENCY	PRIORITY
Incorporation of the non-structural measures of the Hutt River Floodplain Management Plan into the Upper Hutt District Plan	UHCC and Greater Wellington	Medium
Incorporation into the District Plan of the Upper Hutt Fault Trace Study	UHCC and GNS	Medium
Review of District Plan provisions concerning the development of steep and erosion prone land	UHCC	Low
Review of the Mangaroa River Flood Hazard Assessment and incorporation into the District Plan	UHCC and Greater Wellington	Low
Participation in the Pinehaven Stream Catchment study	UHCC and Greater Wellington	Ongoing

Combined Seismic Hazard

