

HRFMP Non-structural Measures

Draft Objectives and Policies Template

Introduction

Approach Used

This template document contains a draft objective and a number of policy statements. It is a first base for future work covering, in general terms, the broad range of potential objectives, policies and methods that stem from the Non-structural Measures Principles. Issues have not been included, but could be incorporated in a brief form for the time-being.

A single *objective* has been formed to represent the entire range of Principles. Beneath this are more specific *policy statements*, which are building blocks for policies that will eventually express the Principles' detail.

The policy statements primarily relate to unprotected flood hazard areas – including the river corridor and the higher-risk flood hazard areas. The statements have been worded to be consistent with the intent of the direction provided by the Regional Policy Statement (RPS) natural hazards chapter, and the Hutt City and Upper Hutt City hazards objectives and policies.

A 'policy explanation' is included for each policy statement. They represent the link to the detail expressed in the non-structural principles, and form the basis of the policy explanations that could support policy in any plan change application. The form of the objectives and policies can be modified as necessary, as the process moves towards analysing, modifying and refining provisions for each Council's plan change documents.

Reviewing the Template and Considering Future Work

Work on draft objectives and policies from August will include:

- ensuring objectives and policies are clear, certain, fair and balanced, while emphasising key messages stemming from the principles
- modifying, refining and reducing objectives and policies where possible
- ensuring objectives and policies are link to draft rules
- providing an RPS analysis to ensure consistency and support for any draft provisions
- providing a section 32 RMA analysis to test the draft provisions against existing district planning provisions and other flood mitigation options.

Objective

Subdivision, use and development of land avoids, reduces or minimises the flood risk, and reduces flood hazard effects and associated impacts to an acceptable level.

Explanation

This objective acknowledges that new subdivision, use and development could, in some instances, increase the Hutt River's flood risk. The level of exposure to the flood risk and the resulting flood hazard effects on use and development cannot be at a level greater than the community is willing to accept. In most circumstances the community will desire a reduced or minimised flood risk. However, in other situations, activities that increase the flood risk may occur only where the increase has been explicitly recognised and accepted by the community.

The Hutt River Floodplain Management Plan's non-structural measures principles recognise the varying levels of flood risk in the Hutt Valley. The principles promote the balanced use of regulatory and non-regulatory approaches to manage the flood hazard risk, that are in addition to any physical or structural forms of flood hazard management.

Regulatory approaches to avoid or mitigate the effects of flooding are promoted particularly where the flood hazard exposure is high, or the resulting effects on structures, land or the remaining environment off-site are significant. Non-regulatory approaches (or 'other methods') centre on voluntary actions and emergency management programmes and procedures. These methods encourage people and communities to increase their understanding and awareness of flooding, and make decisions about their response to the flood hazard in response to good information and advice. Non regulatory approaches will be applied in all areas affected by a direct or residual flood risk.

For this objective, the term, 'flood risk' includes the risk to the community of both inundation and erosion. 'Flood hazard effects' are the undesirable consequences of flooding as a result of fast flowing, or deep and slowing-moving floodwaters. The potential to worsen flood hazard effects may be increased by the inappropriate use and development of land. Examples of situations that worsen these effects include diverting or blocking flood flows, introducing debris and the hazardous substances into floodwaters, or increasing sediment supply. These worsened effects may significantly compromise the flood protection system's effectiveness, the use of structures and land off-site, and the river environment in general.

Policy Statements

Upper Catchment

1. Land-use activities in the upper catchment of the Hutt River shall not significantly increase flood risk in the Hutt Valley. The Upper Hutt City Council will use a range of methods to manage and monitor land use in the upper catchment.

Policy Explanation:

The Hutt River's upper catchment includes the upper reaches of the Hutt River, and the Pakuratahi, Managroa, Whakatikei, and Akatawara Rivers. The policy recognises that there are potential adverse effects of inappropriate use and development in upper catchment areas. Activities that cause run-off or erosion in the upper catchment can increase the flood risk and worsen flood hazard effects downstream. In addition to regulation, other methods will be used that promote practices, such as exchanging resource consent monitoring data or information on land-use consent applications for activities in the upper catchment.

The policy also acknowledges that Upper Hutt City Council has defined their flood hazard management responsibilities under section 31 of the Resource Management Act.

From Non-structural Measures Principle 2 (HRFMP pg 103).

Buildings and Structures in Unprotected Flood Hazard Areas

2. Buildings and structures located in unprotected areas need to be constructed in a way that adequately reduces the flood risk, and avoids or mitigates flood hazard effects on such development.

Policy Explanation:

This policy refers to areas of the Hutt Valley river corridor and floodplain that will not be protected from inundation by new or upgraded stopbanks under the Hutt River Floodplain Management Plan's proposed structural measures. The relevant land generally forms a narrow margin either side of the Hutt River, and involves some areas that have been intensively developed, such as Belmont (Lower Hutt) and Birchville (Upper Hutt), but excludes Seaview in Lower Hutt. These locations are exposed to the flood hazard, with both erosion and inundation potentially affecting many areas. It is accepted that development must be able to continue in these established areas, although landowners and developers will be expected to reduce flood hazard effects to an acceptable level.

For these 'unprotected' areas, new or significantly redeveloped buildings and structures would need to be constructed in a way that adequately reduces the sorts of flood hazard effects that are likely to be experienced there. These effects generally include erosion of the structure's foundations, or inundation by fast-moving or deep-ponded waters. For new habitable buildings (including major extensions) it will be necessary to construct floor levels to the 1900 or 2300 cumec standard, although in other cases (such as for accessory buildings) raised floor levels may not be necessary. Structural strengthening would be essential for buildings in locations susceptible to severe erosion, although seeking alternative - less hazardous sites is preferable where it is practical to do so.

In most situations, constructing buildings and structures outside their associated land use zones may not be appropriate particularly in undeveloped and hazardous areas along the river. This is particularly relevant for significant buildings or structures, including habitable buildings or other buildings which concentrate people frequently in the river corridor (such as schools, certain critical facilities and commercial development). Proposed activities would need to be thoroughly assessed to ensure that people and property were not being exposed to an unacceptable risk, or that unacceptable costs were not being imposed on the community.

From Non-structural Measures Principles 3 to 6 (HRFMP pg 103-105).

3. New buildings and structures in unprotected areas should not create adverse flood hazard effects for other land, buildings and structures off-site.

Policy Explanation:

The policy supports development that does not create significant adverse effects on other structures, buildings or land off-site. Affected structures, buildings or land may be close to the site in question, or some distance either upstream or downstream. Additionally, the cumulative effects of many activities may be just as critical as the direct effects of one-off uses. Affected structures, buildings and land include those used for flood protection purposes.

From Non-structural Measures Principles 3 to 6 (HRFMP pg 103-105).

4. New buildings, apart from certain accessory buildings and ancillary structures, should not be located in highly hazardous parts of the river corridor where flow and erosion effects associated with flooding may be severe.

Policy Explanation:

This objective supports an approach to development that limits the exposure of people and property to a severe flood hazard. Many forms of intensive land use are inappropriate in highly hazardous areas, including constructing habitable buildings and other significant buildings or structures upon which the community is heavily reliant (such as schools, commercial development and certain critical facilities). However, in some situations, such as providing utility services, very minor structures and buildings (such as water pumping stations) may need to be located in highly hazardous locations.

From Non-structural Measures Principles 3, 5 and 6 (HRFMP pg 103-105).

5. Developers or landowners shall provide erosion protection and associated ongoing maintenance if buildings are to be sited within erosion-prone areas.

Policy Explanation:

This policy relates to development in Erosion Hazard Areas. Modern approaches to floodplain management planning discourage new use and development activities in undeveloped areas that are highly likely to require flood protection works to protect them in the future. This is particularly important where there may be additional and significant costs

to the community. However, decisions affecting the use of privately owned land also require a balance between restricting development in response to the flood hazard and reasonable aspirations of land owners and developers. For buildings intended within Erosion Hazard Areas (other than accessory buildings and ancillary structures), the HRFMP non-structural measures principles support provisions that would require landowners and developers to provide:

- protection to reduce the erosion hazard to an acceptable level
- ongoing maintenance of that protection.

The non-structural measures principles also suggest that it may not be practical or feasible to provide erosion protection for individual dwellings in these locations.

From Non-structural Measures Principles 3 and 5 (HRFMP pg 103 and 104).

6. Landowners and developers will be encouraged to seek less hazardous sites to place structures and buildings or provide increased levels of flood hazard mitigation.

Policy Explanation:

Methods other than district planning rules will be also used to promote wise use and development of land susceptible to a significant flood hazard. The three councils will encourage landowners and developers to choose less hazardous sites where it is practical and feasible to do so. In other situations, it may be more appropriate to encourage an increased level of flood hazard mitigation, particularly where gains in the level of property protection may be economically beneficial or desirable for other reasons. For example, methods to reduce flood hazard effects might include flood proofing of the building site, structural strengthening or raising floor levels.

From Non-structural Measures Principles 3 to 10 and 13 (HRFMP pg 103 –107).

Subdivision in Unprotected Flood Hazard Areas

7. Subdivision that enables the construction of new buildings will be discouraged in areas susceptible to a significant flood risk.

Policy Explanation:

To meet this policy, subdivision would be strongly discouraged in locations where the resulting land-use may expose people and assets to a significant flood risk, such as in the Primary River Corridor. In many situations the land in question may not be zoned for the intended end use. However, in other situations subdivision could be allowed in areas already zoned for the intended end use and where the flood risk is not as significant, providing the district plan's general subdivision rule requirements are met and adequate flood hazard mitigation is ensured. Such areas include parts of the Secondary River Corridor or Higher-risk Floodplain Hazard Areas. Finally, a key requirement in decision-making on subdivision applications will be achieving an acceptable level of risk and exposure to the flood hazard.

From Non-structural Measures Principle 7 (HRFMP pg 105).

Earthworks in Unprotected Flood Hazard Areas

8. All new earthworks will be required to adequately mitigate adverse flood hazard effects for other land, buildings and structures off-site.

Policy Explanation:

This policy will be achieved mainly by controlling setback distances from flood protection structures as well as the volume, dimensions and timing of earthworks, and the potential for cumulative adverse effects. For this policy earthworks include both excavation and filling.

From Non-structural Measures Principle 8 (HRFMP pg 105).

Hazardous Substances in Unprotected Flood Hazard Areas

9. Stored hazardous substances shall be secure in significant flood events.

Policy Explanation:

This policy applies to commercial and industrial users of hazardous substances located in River Corridor or Higher-risk Floodplain Hazard Areas. It does not apply to domestic users, retail outlets, trade waste sewer and waste treatment or disposal facilities, gas or oil pipelines, transformers mounted on polls, the application of agricultural chemicals, fuel in motor vehicles, boats and engines, and the occasional loading and off-loading of hazardous substances.

For this policy, a significant flood event means a flood up to, or greater than, the 2300 cumec standard. The expectation is that hazardous substances will need to be stored in a way that withstands the effects of at least a 2300 cumec flood. This will enable the risk of these substances entering floodwaters during an event to be substantially reduced. Furthermore, commercial and industrial users of hazardous substances will be discouraged from siting in the Hutt River Corridor to help avoid a substantial flood risk in the first place.

From Non-structural Measures Principle 9 (HRFMP pg 106).

Critical Facilities

10. Critical facilities shall be better prepared to minimise the effects of a major flood on their operations.

Policy Explanation:

Critical facilities include emergency services, healthcare facilities and key buildings or structures of network utilities. This policy advocates that providers of these facilities will be discouraged from siting in areas exposed to the flood hazard. The HRFMP non-structural measures principles acknowledge that in some situations it will be necessary to locate services, such as key network utility facilities, in hazardous locations like the river corridor. Contingency plans, also known as business continuity plans, would be required where these hazardous locations cannot be avoided. Additionally, the policy anticipates that certain new critical facilities exposed to the flood hazard would be required to mitigate the adverse effects of a 2800 cumec flood. However, that requirement would only affect Key Network Utility Facilities.

From Non-structural Measures Principle 10 (HRFMP pg 106).

Capacity of New and Replaced Bridges

11. New and replaced bridges crossing the Hutt River and their associated floodways will be required have the capacity to pass a 2800 cumec flood. The high standard promoted by this policy excludes Akatarawa Bridge at Birchville.

Policy Explanation:

This policy reflects a specific technical requirement for meeting the Hutt River's risk-based design standard. Policy 15 of the HRFMP supports the requirement that new and replaced bridges and their floodways will need meet the 2800 cumec flood standard. The 2800 cumec standard allows appropriate leeway to meet any reasonable future modifications to the flood design standard for the Hutt River. Bridge modifications would need to be achieved without adversely affecting adjacent flood defences, or increasing the flood risk. A high standard for bridge and floodway capacity was selected for a number of reasons, discussed in chapters three and four of the HRFMP.

From Non-structural Measures Principle 11 (HRFMP pg 107).

Hutt River Corridor Land Remaining in Public Ownership

12. Public ownership of Hutt River corridor lands is desirable, to enable more effective management of the flood hazard.

Policy Explanation:

Where possible, river corridor lands should remain in public ownership to enable the flood hazard to be more effectively managed. Public ownership means that appropriate uses of flood- and erosion-prone land, including recreation and open space uses, can be more readily advanced. More importantly, land-uses commonly associated with private ownership, including commercial, industrial or residential development, can be avoided in the river corridor. Furthermore, new intensive land-uses would be actively discouraged from siting in the river corridor.

From Non-structural Measures Principle 12 (HRFMP pg 107).

Information on Property Titles and Voluntary Actions

13. A variety of tools, in addition to district planning provisions, will be promoted to improve the community's awareness, understanding and response to the flood hazard.

Policy Explanation:

Other non-structural tools to avoid or mitigate the flood hazard will also be fostered and promoted in the Hutt Valley. These tools include, but are not limited to, the following:

- *Voluntary actions promoted catchment-wide, such as guidance for constructing building and structures and placing fill appropriately, or encouraging alternative locations for development.*
- *Emergency management programmes and procedures developed to promote awareness, understanding, and appropriate responses to flood events.*
- *Information on new titles for properties not protected from the flood hazard by the proposed structural works*
- *Information on existing titles when new buildings and major additions are constructed in properties not protected from the flood hazard by proposed structural works.*

These tools may be used instead of, or in addition to, district plan rules. Selecting the best set of the tools depends on the practicality, feasibility and appropriateness of the application tool being considered for each situation. However, in most all cases, emergency management will be promoted irrespective of whether district-planning provisions exists or not. In the case of both emergency management and voluntary actions, the community will need regular and up-to-date information on the flood hazard.

From Non-structural Measures Principles 13 and 14 (HRFMP pg 107and108).

Environmental Strategy

14. New buildings and structures in publicly owned areas of the Hutt River Corridor will be generally consistent with the Hutt River Environmental Strategy.

Policy Explanation:

New development in publicly owned areas of the Hutt river corridor needs to occur in a manner that is generally consistent with the linear park concept, and the general vision for the river corridor promoted through the Environmental Strategy.

From Non-structural Measures Principle 2 (HRFMP pg 107and108).