

CHAIRMAN AND MEMBERS
POLICY COMMITTEE (22nd June 2011)
(From Senior Planner (Policy))
(Through the Director of Environmental Services)



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Proposed Plan Change 15 - Flood and Erosion Hazard Areas

1.0 Purpose of Report

- 1.1. The purpose of this report is to seek Council's endorsement to proceed with the notification of Proposed Plan Change 15 (Plan Change 15) to the Upper Hutt District Plan. Plan Change 15 seeks to include and update flood and erosion hazard areas for the Mangaroa and Hutt Rivers within the Upper Hutt District Plan (District Plan), along with supporting objectives, policies, rules and maps that are intended to ensure that development in these areas is adequately managed.
- 1.2. Plan Change 15 proposes to update and expand existing flood and erosion hazard information in Chapters 3, 8, 14, 16, 23, 30, 33, 34, 35 and the Planning Maps of the District Plan.
- 1.3. The following reports are appended:
 - Appendix 1 - Section 32 Report
 - Appendix 2 - Proposed changes to District Plan text:
 - 2a Proposed changes to objectives & policies
 - 2b Proposed changes to rules
 - 2c Proposed changes to planning maps
- 1.4. The Hutt River Floodplain Management Plan is available on Greater Wellington Regional Council's website <http://www.gw.govt.nz/hutt-river-flood-plain-management-plan/> as is the Mangaroa River Flood Hazard Assessment <http://www.gw.govt.nz/mangaroariver/>

2.0 Background

- 2.1. Plan Change 15 implements work undertaken by the Greater Wellington Regional Council (GWRC) identifying and assessing the flood and erosion hazard areas for the Mangaroa and Hutt Rivers. GWRC has developed the Hutt River Floodplain Management Plan (HRFMP) and the Mangaroa River Flood Hazard Assessment (MRFHA), which provide information on the flooding and erosion risk of the Hutt River and the Mangaroa River. Hydraulic modelling of the Hutt River and Mangaroa River has been undertaken as part of the development of these documents to identify the hazard areas and assist in the development of planning controls to address the hazards of these rivers.
- 2.2. The proposed plan change is in line with similar work already undertaken by the Hutt City Council to incorporate the HRFMP into the Hutt City District Plan, as it relates to the lower reaches of the Hutt River.

The Flooding and Erosion Issue

- 2.3. Flooding is a major environmental management issue facing residents of Upper Hutt. A large flood can cause extensive damage to property and pose a danger to people.
- 2.4. Along the Hutt River, the historical response to flood risk has been to build a flood defence system along most of the Hutt River's length, gradually straightening the river channel and extracting substantial quantities of gravel to improve the river's flood capacity. By 1972 the flood protection system was largely in place. Since 1972 isolated and substandard stopbanks have progressively been extended or rebuilt, and existing stopbanks maintained. Gravel extraction and river straightening have steadily been replaced by a focus on re-establishing bank-edge vegetation and strengthening bank edges.
- 2.5. As part of the HRFMP, GWRC proposes to undertake a number of structural measures to improve the existing flood protection systems. The document uses a risk-based 2300 cumec¹ standard (1 in 440 year flood event) as a minimum design standard for upgrades to flood defences along the Hutt River. This approach applies varying protection standards to different areas of the floodplain depending on how flood-prone they are. As a general rule the greater the assets at risk on the floodplain the higher the standard of protection.
- 2.6. However, even with these flood protection upgrades, the risk of floodwaters breaching defences cannot be completely eliminated. Non-structural measures like those proposed by Plan Change 15 complement structural measures for flood protection. Non-structural methods are a more cost-effective flood mitigation approach because they can prevent considerable flood damages at little cost to the wider community. Flood damages can be reduced by limiting future development in flood prone areas and ensuring that any such development incorporates flood risk management measures.
- 2.7. In the case of the Mangaroa River, the non-structural measures proposed as part of Plan Change 15 are of even greater importance. The Mangaroa River floodplain is much less developed than the Hutt River floodplain. Structural measures to manage the flood risk are not suggested by GWRC for the Mangaroa River. Plan Change 15 seeks to avoid the need for expensive future flood protection works along the Mangaroa River by limiting development within the flood hazard areas.
- 2.8. The HRFMP and MRFHA identify various flood hazard 'sub-areas' which are utilised in this plan change. The first of these is the **River Corridor** which is the land immediately adjacent to the river. The river corridor width is determined either by stopbanks or where there are no stopbanks its width is set by:

- Geological features; or

For the Hutt River

- The extent of a 2800 cumec flood [(except where erosion hazard areas lie outside the 2800 extent) this is a rare flood (approximately a 1 in 3000 year event)]; or
- The riverside margin of existing houses at Bridge Road, Akatarawa, where those properties extend into erosion hazard areas; or

Comment [AB1]: Tracy – how often do these occur? I'm aware the HRFMP calls them a rare flood event. Are we able to call it a 1 in something event?

¹ A cumec is a measure of water flow. 1 cumec (1 cubic metre per second) equals 1 cubic metre of water passing a given point every second.

- The area upstream of Gemstone Drive which is treated slightly differently because there are no structural measures existing or proposed.

For the Mangaroa River

- The extent of a 1 in 100 year (372 cumec) flood event.

- 2.9. The remaining flood-prone area outside the river corridor is generally termed the floodplain, which is comprised of **Overflow Paths** where fast-flowing waters will form, **Ponding Areas** where floodwater is slow-flowing and deep, and areas where **Erosion Hazard** is an issue.
- 2.10. The District Plan currently identifies a 1 in 100-year flood extent for the Hutt River, and no flood extent for the Mangaroa River. The District Plan also does not include information regarding the erosion hazard caused by the Hutt and Mangaroa Rivers.

3.0 Plan Change 15

- 3.1. Plan Change 15 seeks to manage the flood and erosion hazard risk in Upper Hutt by incorporating current flood hazard information into the District Plan. The objectives, policies and rules are intended to accommodate the Hutt River and Mangaroa River flood and erosion hazard areas identified by GWRC. The provisions are structured so that future information regarding flood and erosion risks can be incorporated into the District Plan with ease.
- 3.2. To accommodate the differences between the Hutt River and the Mangaroa River Plan Change 15 identifies flood and erosion hazard areas specific to each river, based on the individual assessments undertaken by GWRC. The assessment methodology undertaken by GWRC has been applied consistently across the respective rivers using current best practice methods².
- 3.3. The changes that Plan Change 15 seeks to make to the District Plan can be summarised as follows:

Comment [AB2]: Tracy can I have something from you here to qualify this statement (if it is correct).

- Changes to the existing policies in Chapters 3 (Zoning), 8 (Special Activity Zone) and changes to the introductory text, resource management issues, objective, policy and methods in Chapter 14 (Natural Hazards). These changes incorporate more information about the flooding and erosion hazard along the Hutt and Mangaroa Rivers.
- A minor amendment to an existing resource management issue in Chapter 16 (Utilities).
- Changes to the rules in Chapter 23 (Earthworks and Vegetation Clearance) regarding earthworks within the Flood Hazard Area.
- Changes to the rules in Chapter 30 (Rules for Utilities) to ensure transformers, water & wastewater pumping stations and telecommunications facilities (excluding lines and cables) are appropriately placed outside of the Flood Hazard Area or are assessed through the resource consent process to ensure they are appropriately designed and located. The matters for consideration outlined in rule 30.13 would also be amended to include consideration of the flood hazard issue.
- Significant changes to the rules in Chapter 33 (Rules for Flooding and Fault Band Hazards) are proposed, including addition of the following to the activities table:
 - One accessory building per site with a floor area of 20m² or less to be erected within the Ponding Area would be a permitted activity.

² NZS 9401:2008 'Managing flood risk – A Process Standard

- All new buildings, structures and subdivision within the Ponding Area (not including those buildings or structures otherwise provided for) would require resource consent approval as a discretionary activity.
- All new buildings and structures (including accessory buildings) erected within the River Corridor, Overflow Path and Erosion Hazard Line would require resource consent approval as a non-complying activity.
- Subdivision within the Ponding Area would require resource consent approval as a discretionary activity.
- Subdivision within the River Corridor, Overflow Path and on the river-side of the Erosion Hazard Line would require resource consent approval as a non-complying activity.

In addition, corresponding notes to the activities table would be amended to provide relevant explanatory text and the existing matters for consideration would be amended.

- The activity table in Chapter 34 (Rules for Hazardous Substances and Contaminated Land) would be amended to require resource consent approval for the storage of hazardous substances in the Flood Hazard Area as a discretionary activity.
- Chapter 35 (Definitions) would be amended to include definitions for the following terms:
 - Building (current definition to be amended)
 - Erosion hazard line
 - Flood hazard area
 - Non-structural measure
 - Overflow path
 - Ponding area
 - River corridor
 - Structural measure
 - Structure
- The existing Planning Maps would be amended to depict the Flood Hazard Area (shown in a similar fashion to the current 1:100 year flood extent). A corresponding set of separate maps would depict the sub-areas within the Flood Hazard Area, namely the River Corridor, Overflow Path, Ponding Areas and Erosion Hazard Line.

4.0 Statutory Provisions

4.1. Sections 31(1)(a) & (b) of the Resource Management Act 1991 (RMA) state that Council must fulfil the following functions:

31(1)(a) *"[...]the establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the effects of the use, development or protection of land and associated natural and physical resources of the district:*

(b) the control of any actual or potential effects of the use, development, or protection of land, including for the purpose of-

(i) the avoidance or mitigation of natural hazards; and

(ii) the prevention or mitigation of any adverse effects of the storage, use, disposal, or transportation of hazardous substances; and

(iia) the prevention or mitigation of any adverse effects of the development, subdivision or use of contaminated land:

(iii) the maintenance of indigenous biological diversity..”

4.2. Flooding and erosion hazards are included in the definition of natural hazards outlined in Part 1 of the RMA:

“natural hazard means any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire, or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment”

4.3. Section 74(1) of the Resource Management Act provides for Council to undertake changes to the District Plan. Section 74(1) states that:

“A territorial authority shall prepare and change its district plan in accordance with its functions under section 31, the provisions of Part 2, a direction given under section 25A(2), its duty under section 32, and any regulations.”

4.4. The process for changing a District Plan is outlined in the First Schedule of the RMA. Clause 5(1) of the First Schedule states that:

“A local authority that has prepared a proposed policy statement or plan shall publicly notify it.”

4.5. Before a proposed plan change can be publicly notified, Section 32 of the RMA requires an evaluation to be carried out. An evaluation must examine:

- (a) The extent to which each objective is the most appropriate way to achieve the purpose of the Act; and
- (b) Whether, having regard to their efficiency and effectiveness, the policies, rules, or other methods are the most appropriate for achieving the objectives.

4.6. An evaluation must also take into account:

- (a) the benefits and costs of policies, rules, or other methods; and
- (b) the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods

4.7. A Section 32 evaluation for Plan Change 15 is attached in Appendix 1.

Regional Policy Statement

4.8. The RMA states that a district plan change must give effect to a regional policy statement (Section 75(3)) and have regard to any proposed regional policy statement (Section 74(2)(a)).

4.9. GWRC's Proposed Regional Policy Statement (PRPS) was approved and notified by GWRC in May 2010. UHCC submitted on parts of the PRPS and has subsequently lodged an appeal with the Environment Court. The appeal seeks alterations to the following PRPS policies:

Policy 28: *Avoiding subdivision and inappropriate development in areas at high risk from natural hazards – district and regional plans; and*

Policy 50: *Minimizing the risks and consequences of natural hazards – consideration.*

- 4.10. Broadly speaking, UHCC is seeking to ensure that *appropriate* subdivision and development is able to be provided for in areas at risk from natural hazards and as such the provisions under appeal have implications for the proposed plan change.
- 4.11. Discussions between UHCC and the GWRC have commenced and the appeal is in the process of being resolved through informal mediation.
- 4.12. The Section 32 analysis in Appendix 1 to this report examines the relationship between Plan Change 15 and the operative and proposed policy statements in greater detail.

5.0 Consultation

- 5.1. Informal pre-consultation targeted at affected landowners has been undertaken and has included public meetings and an informal submissions process whereby landowners have had the opportunity to view the proposed provisions and accompanying maps. Landowners were invited to provide feedback through the Council website.
- 5.2. As afore-mentioned, in contrast to the Hutt River, the Mangaroa River does not have an existing District Plan flood hazard area and has attracted considerable public interest through informal pre-consultation. As a result of feedback from landowners, Council committed to preparing the plan change for the Mangaroa River in tandem with the changes proposed for the Hutt River.
- 5.3. Issues raised by the landowners have been largely centred on the perceived costs in terms of reduced property values and reduced development and/or subdivision potential. It is expected that further feedback of this nature will be conveyed by submitters through the formal RMA submission process that will follow.
- 5.4. The GWRC documents which underpin this plan change (the Hutt River Floodplain Management Plan and the Mangaroa River Flood Hazard Study) are documents that are available to the public. The GWRC has provided assistance with public enquiries that require site-specific interpretation of the studies, such as enquiries for Planning and Building Consent matters. This method of providing site-specific advice to landowners will be ongoing. Land Information Memoranda (LIMs) will also continue to include flooding information from the GWRC studies.
- 5.5. Further pre-consultation will be undertaken on the proposed plan change with the Ministry for the Environment and Tangata Whenua as required by Clause 3 of the first Schedule of the Resource Management Act 1991.
- 5.6. No additional consultation is deemed necessary other than the public notification process required by the RMA. Members of the public will have the opportunity to make formal submissions on the plan change as part of this process.

6.0 Legal and Financial Implications

- 6.1. As with any change to the District Plan, the proposed plan change will be open to appeal to the Environment Court, which would have financial implications.

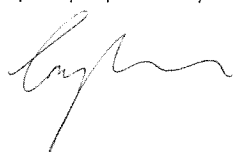
7.0 Conclusions

- 7.1. Plan Change 15 seeks to update and include flood and erosion hazard areas for the Mangaroa and Hutt Rivers within the Upper Hutt District Plan, along with objectives, policies and rules that are intended to ensure that development in these areas is appropriately managed.
- 7.2. Public notification is the next step in the plan change process. Publicly notifying Plan Change 15 will allow members of the public to make submissions.

8.0 Recommendations

1. **THAT** proposed Plan Change 15 to the Upper Hutt District Plan 2004 is publicly notified as soon as practicable in accordance with the requirements of the First Schedule of the Resource Management Act 1991.
2. **THAT** Council authorise Officers to make any minor non-policy changes to the details of proposed Plan Change 15 should the need arise.

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APPENDIX 1
Proposed Plan Change 15- Flood and Erosion Hazard
Areas
Section 32 Analysis

1.0 Introduction

- 1.1 Section 32 of the Resource Management Act 1991 (the RMA) requires that a section 32 analysis be undertaken before the notification of a plan change by Council. Sections 32(3) and 32(4) provide guidance as to what such an evaluation must examine and consider, as follows:

"32(3) An evaluation must examine –

- (a) the extent to which each objective is the most appropriate way to achieve the purpose of this Act; and*
- (b) whether, having regard to their efficiency and effectiveness, the policies, rules, or other methods are the most appropriate for achieving the objectives.*

32(4) For the purposes of examinations referred to in subsections (3) and (3A), an evaluation must take into account—

- (a) the benefits and costs of policies, rules, or other methods; and*
- (b) the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules or other methods."*

- 1.2 The purpose of the Resource Management Act 1991 is defined by section 5 of the Act as follows:

5(1) The purpose of this Act is to promote the sustainable management of natural and physical resources.

- 1.3 This report should be read in conjunction with the Hutt River Floodplain Management Plan and the Mangaroa River Flood Hazard Assessment (both available on GWRC's website <http://www.gw.govt.nz/hutt-river-flood-plain-management-plan/> and <http://www.gw.govt.nz/mangaroariver/>). All proposed changes to the District Plan resulting from the Plan Change are included as Appendix 2.

2.0 Background

- 2.1 As detailed in the cover report, in accordance with section 31(1)(b) of the RMA Council must control any actual or potential effects of the use, development, or protection of land, including for the purpose of the avoidance or mitigation of natural hazards.

- 2.2 Section 2 of the RMA defines a natural hazard as: "[a]ny natural process that can adversely affect human life, property or valued aspects of the natural environment including: earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire or flooding."

Hutt River Floodplain Management Plan (HRFMP) and Mangaroa River Flood Hazard Assessment (MRFHA)

- 2.3 The proposed plan change follows on from work undertaken by the Greater Wellington Regional Council (GWRC), identifying and assessing the flood and erosion hazard areas for the Hutt and Mangaroa Rivers.
- 2.4 GWRC has developed the HRFMP, which provides information on the flooding and erosion risk of the Hutt River, and the MRFHA, which provides flooding and erosion risk information for the Mangaroa River.
- 2.5 The HRFMP is a 40 year blue print for managing and implementing programmes that will gradually reduce flood risk from the Hutt River. The plan was a joint effort between the GWRC, Hutt City Council and Upper Hutt City Council, and reflects the varied and shared responsibilities of the three councils involved. The HRFMP provides for structural and non structural measures to manage flood risk.
- 2.6 Hydraulic modelling of the Hutt River and Mangaroa River has been undertaken for the HRFMP and MRFHA to identify the hazard areas and assist in the development of planning controls to address the hazards within the Hutt and Mangaroa Valleys.
- 2.7 The proposed plan change seeks to take a consistent approach to managing the flood and erosion hazard risk in Upper Hutt. The objectives, policies and rules are intended to accommodate the Hutt River and Mangaroa River flood and erosion hazard areas.

Upper Hutt Urban Growth Strategy

- 2.8 The proposed plan change would implement the objectives relating to flooding set down by the Urban Growth Strategy (UGS)¹ by incorporating the non-structural measures of the HRFMP and the MRFHA into the District Plan. In addition to this, the proposed provisions would be structured in a way that would enable flooding information for other rivers to be easily inserted as the information becomes available.

Proposed Regional Policy Statement

- 2.9 Section 74(2) of the Act requires that in changing a District Plan, regard shall be had to a proposed regional policy statement. The GWRC Proposed Regional Policy Statement (PRPS) should be considered in a manner which results in the proposed plan change aligning itself with the relevant PRPS provisions, thereby minimising and perhaps eliminating any later inconsistencies.
- 2.10 The relevant provisions of the PRPS are those relating to natural hazards. The following objectives are considered relevant:
- **Objective 18:** *The risks and consequences to people, communities, their businesses, property and infrastructure from natural hazards and climate change effects are reduced.*
 - **Objective 19:** *Hazard mitigation measures, structural works and other activities do not increase the risk and consequences of natural hazard events.*

¹ See pages 89 & 92, *Upper Hutt Urban Growth Strategy*, September 2007.

- o **Objective 20:** Communities are more resilient to natural hazards, including the impacts of climate change, and people are better prepared for the consequences of natural hazard events.

2.11 The following PRPS policies which direct district plans, and consequently must be given effect to, are considered relevant:

- o **Policy 14:** Minimising the effects of earthworks and vegetation disturbance – district and regional plans:

Regional and district plans shall include policies, rules and methods that control earthworks and vegetation disturbance to minimise:

- (a) erosion; and
- (b) silt and sediment runoff into water, or onto land that may enter water, so that aquatic ecosystem health is safeguarded.

- o **Policy 28:** Avoiding subdivision and inappropriate development in areas at high risk from natural hazards – district and regional plans

Regional and district plans shall:

- identify areas at high risk from natural hazards; and
- include policies and rules to avoid subdivision; and
- include policies and rules to avoid inappropriate development in those areas.

2.12 The following PRPS policies list matters that must be given particular regard when assessing and deciding on resource consents, notices of requirement and when undertaking a district plan change:

- o **Policy 50 (consideration):** Minimising the risks and consequences of natural hazards

When considering an application for a resource consent, notice of requirement, or a change, variation or review to a district or regional plan, the risk and consequences of natural hazards on people, communities, their property and infrastructure shall be minimised, and/or in determining whether an activity is inappropriate particular regard shall be given to:

- (a) the frequency and magnitude of the range of natural hazards that may adversely affect the proposal or development, including residual risk;
- (b) the potential for climate change and sea level rise to increase the frequency or magnitude of a hazard event;
- (c) whether the location of the development will foreseeably require hazard mitigation works in the future;
- (d) the potential for injury or loss of life, social disruption and emergency management and civil defence implications - such as access routes to and from the site;
- (e) any risks and consequences beyond the development site;
- (f) the impact of the proposed development on any natural features that act as a buffer, and where development should not interfere with their ability to reduce the risks of natural hazards;
- (g) avoiding inappropriate development in areas at high risk from natural hazards;

- (h) *the potential need for hazard adaptation and mitigation measures in moderate risk areas; and*
- (i) *the need to locate habitable floor areas and access routes above the 1:100 year flood level, in identified flood hazard areas.*

- o **Policy 51 (consideration):** *Minimising adverse effects of hazard mitigation measures*

When considering an application for a resource consent, notice of requirement, or a change, variation or review of a district or regional plan, for hazard mitigation measures, particular regard shall be given to:

- (a) *the need for structural protection works or hard engineering methods;*
- (b) *whether non-structural or soft engineering methods are a more appropriate option;*
- (c) *avoiding structural protection works or hard engineering methods unless it is necessary to protect existing development or property from unacceptable risk and the works form part of a long-term hazard management strategy that represents the best practicable option for the future;*
- (d) *the cumulative effects of isolated structural protection works; and*
- (e) *residual risk remaining after mitigation works are in place, so that they reduce and do not increase the risks of natural hazards.*

2.13 The PRPS requires that communities should be made aware of and more resilient to natural hazard risks. The proposed plan change seeks to identify the flood risk and put in place rules and policies to manage development within the flood hazard area.

2.14 Policies 28 and 50 are particularly relevant; in that district plans shall identify areas of high risk and include policies and rules to avoid subdivision and inappropriate development in hazard areas. UHCC has undertaken Environment Court appeal proceedings in respect of the proposed wording of Policy 28. Specifically, the appeal seeks to ensure that *appropriate* subdivision in the flood hazard area can still be provided for in the District Plan. As mentioned in the covering report, discussions between UHCC and the GWRC are underway and the appeal is in the process of being resolved through informal mediation.

2.15 As the PRPS is at an advanced stage of conception, and the scope of the appeals lodged is very limited, it would be prudent to ensure that the proposed plan change is aligned with the relevant PRPS provisions.

2.16 In summary, it is considered that Plan Change 15 is consistent with the PRPS.

Operative Regional Policy Statement

2.17 Chapter 11 of the operative Regional Policy Statement (RPS) relates to natural hazards.

2.18 The following objective is considered relevant:

- o **Objective 11.3:** *Any adverse effects of natural hazards on the environment of the Wellington Region are reduced to an acceptable level.*

2.19 The following policies are considered relevant (under **Policy 11.4**):

- **Policy 1:** To ensure that there is sufficient information available on natural hazards to guide decision making.
- **Policy 2:** To consider all of the following matters when planning for, and making decisions on, new subdivision, use, and development in areas which are known to be susceptible to natural hazards:
 - 1) The probability of occurrence and magnitude of the natural hazards, and the location of the effects, including any possible changes which might arise from climate change;
 - 2) The potential consequences of a natural hazard event occurring, both on-site and off-site. Potential loss of life, injury, social and economic disruption, civil defence implications, costs to the community, and any other adverse effects on the environment should be considered;
 - 3) The measures proposed to mitigate the effects of natural hazard events, the degree of mitigation they will provide, and any effects on the environment from adopting such measures;
 - 4) Alternative measures that might be incorporated into the subdivision, use and development to mitigate the effects of natural hazard events, the degree of mitigation they will provide, and any effects on the environment from adopting such measures. Both structural and non-structural measures should be considered;
 - 5) The benefits and costs of alternative mitigation measures;
 - 6) The availability of alternative sites for the activity or use; and
 - 7) Any statutory obligations to protect people and communities from natural hazards.
- **Policy 3:** To recognise the risks to existing development from natural hazards and promote risk reduction measures to reduce this risk to an acceptable level, consistent with Part II of the Act.
- **Policy 4:** To ensure that human activities which modify the environment only change the probability and magnitude of natural hazard events where these changes have been explicitly recognised and accepted.
- **Policy 5:** To encourage people and communities to prepare for the occurrence of natural hazard events by providing them with relevant information and advice.

2.20 Therefore the operative RPS seeks to reduce risks arising from natural hazards. Proposed Plan Change 15 is aligned with these objectives and policies.

Upper Hutt District Plan

2.21 The District Plan currently contains a 1 in 100 year flood extent for the Hutt River and some rules relating to development in this area. The current flood extent does not apply to the Mangaroa River.

2.22 Under the current rules (prescribed by chapter 33: Rules for Flooding and Fault Band Hazards), all new buildings and structures within the 1 in 100 year flood extent require resource consent. Subdivision is not specifically addressed in the current provisions, however s106 of the Resource Management Act gives Council the ability to consider hazards in respect of subdivision.

3.0 Proposed Plan Change

- 3.1 The key focus of the plan change, and an important objective for floodplain management planning by GWRC, is keeping people and inappropriate development away from floodwaters and erosion hazards.
- 3.2 Formerly, the District Plan only contained information regarding the flood hazard from the Hutt River. This plan change seeks to update and strengthen existing provisions, whilst additionally guiding development within the Mangaroa River catchment.
- 3.3 The Mangaroa River catchment is largely comprised of rural-zoned land and the existing pattern of development is typically low density. In light of this, it is considered opportune to implement the proposed plan change in order to avoid development in areas at risk from flooding effects, rather than allowing development that requires flood defences.
- 3.4 Generally speaking, PC15 seeks to manage landuse and development, focusing on:
- Structures and buildings, including accessory buildings;
 - Subdivision;
 - Earthworks;
 - Storing hazardous substances; and
 - Utility facilities.
- 3.5 PC15 updates and expands existing flood and erosion hazard information relevant to the Hutt and Mangaroa Rivers in chapters 3, 8, 14, 16, 23, 30, 33, 34 & 35 and the Planning Maps.
- 3.6 PC15 seeks to improve knowledge about the flood hazard, understanding about the effects of floods and to strengthen the community's preparedness for floods.

Defining the Flood Hazard Area

- 3.7 The GWRC has defined the flood and erosion hazard areas of the Hutt River and the Mangaroa River by delineating and identifying the River Corridor, Overflow Path and Ponding Areas and the Erosion Hazard Line. As previously stated, hydraulic modelling has been undertaken to ascertain these areas.
- 3.8 The **River Corridor** includes land adjacent to the river and is the minimum area able to contain a major flood and enable water to pass safely to the sea. It includes flood and erosion prone land immediately adjacent to the river, where the risk to people and development is significant.
- 3.9 The **Erosion Hazard Line** identifies land potentially at risk of erosion from river movement. Land on the river-side of the line could be at risk from erosion over time due to the flow, velocity and meander patterns of rivers.
- 3.10 The **Overflow Path** areas generally occur in lower-lying areas on the floodplain which act as channels for flood waters. They are often characterised by fast flowing water during a flood event. A blocked overflow path could potentially cause a redistribution of flood flows to other areas.

3.11 **Ponding Areas** are those areas on the floodplain where slower-moving waters could pond either during or after a flood event.

4.0 Appropriateness of Objectives

4.1 As the Plan currently contains information regarding the 1 in 100 year flood extent for the Hutt River, an existing policy framework for flood hazards currently exists. Chapter 14: Natural Hazards naturally has the most relevance to the flooding issue, and Chapter 8: Special Activity Zone, contains an objective specifically addressing the flood hazard that occurs on the St Patricks Estate site. The existing objectives contained in these chapters are considered appropriate to accommodate the new information being introduced by the Plan Change; however proposed changes to the explanatory text would be introduced, as outlined below.

4.2 It is proposed to make the following amendments to objective 8.3.3²

8.3.3 *Provision for a range of activities on the St Patrick's Estate Area which avoids, remedies or mitigates any adverse effects on its visual amenity, on the neighbouring community, services and roading infrastructure, and takes into account the flooding hazards.*

St Patrick's Estate is an area of land with potential for a wide range of development options. This area is dealt with under a specific policy framework within the Special Activity Zone. The St Patrick's Estate contains two distinct areas for future development, which are identified on the Planning Maps:

- The St Patrick's College Area for future education expansion.
- The Managed Development Area for a range of other uses.

Controls are required to ensure subdivision and prevent development are managed appropriately due to the flood hazard risk posed by the ~~in close proximity to~~ Hutt River and Mawaihakona Stream.

4.3 The following changes are proposed for objective 14.3.1

² Text shown with a ~~strike through~~ would be deleted and additional text is shown underlined.

14.3.1 *The avoidance, remedying or mitigation of the adverse effects of natural hazards on the environment.*

~~The Council has the responsibility under the Act to protect all aspects of the environment, not just people and property, from the adverse effects of natural hazards. Amenity values of an area and its ecological systems should also be protected against natural hazards.~~

Subdivision and development in areas at high risk from natural hazards should be avoided unless the adverse effects can be appropriately avoided, remedied or mitigated. It is acknowledged that it is not always feasible or practicable to avoid, remedy, or mitigate all potential effects of natural hazards at all times for all aspects of the environment.

Council will actively discourage the implementation of extensive structural mitigation works such as the construction of stopbanks along river margins. Development proposals will be required to demonstrate to Council that potential adverse effects of natural hazards can be adequately avoided or mitigated by using non-structural measures.

~~Some priority must be placed~~ Council has placed priority on protecting human life and property from the adverse effects of natural hazards, but preferably. Preferably this can be achieved in conjunction with achieving other goals, such as maintaining and enhancing amenity values.

~~The goal in managing the effects of natural hazards within the City, therefore is the avoidance-avoiding, remedying or mitigation-of mitigating the adverse effects of natural hazards on the environment as appropriate to the circumstances, with priority on community protection-safety.~~

5.0 Appropriateness of policies, rules and other methods for achieving the objectives

Evaluation of proposed policies for achieving the objectives

- 5.1 The following table provides a summary evaluation of how the proposed changes to policies achieve the relevant objectives, as required by s32(b) of the Act.

POLICIES	EFFECTIVENESS & EFFICIENCY	BENEFITS	COSTS
<p>Policy 3.4.2 To recognise special resource or environmental issues which exist within the City.</p> <p>As a result of particular issues arising that require different management techniques, special controls have been established to address specific environments or resource issues within the principal zones. These recognise the special qualities or issues facing an area, and enable more specific techniques to be used to promote sustainable management. Such controls are applied to areas with particular amenity or other environmental qualities. Conservation and Hill Areas cover special environments with high amenity values within the Residential Zone.</p> <p><u>The flood and fault band hazard areas are special environments that require particular controls to ensure development in these areas is managed appropriately.</u></p> <p>Relevant objective: Objective 3.3.1 The management of the natural and physical resources of the City in a way that reflects the identified resource management issues and the need to control the actual and potential effects of the use, subdivision and development of resources.</p>	<p>The proposed amendment to the explanatory text is efficient and effective as it acknowledges flood hazard as a special environmental issue that has implications across all zones of the City.</p>	<ul style="list-style-type: none"> The changes recognise that parts of the City that are subject to flood hazards should be subjected to particular controls to address the flooding issue. The changes recognise that flooding hazards are a city-wide issue. 	<ul style="list-style-type: none"> Properties within the flood hazard area would be subject to additional regulatory controls. The resource consent process imposes a monetary cost on landowners and developers.
<p>Appropriateness for achieving the objective: The proposed amendment to the existing explanatory text assists in achieving this objective as it acknowledges that flooding hazards are a city-wide issue.</p> <p>Policy 8.4.4 To provide for a range of activities within the St Patrick's Estate Area which best suit the characteristics and constraints of the existing environment.</p> <p>Two distinct areas provide for a range of commercial, open space and educational activities appropriate to the</p>	<p>The proposed amendment to the explanatory text is efficient and effective as it specifies a requirement for appropriate flood risk management measures to be undertaken in order for subdivision or development to occur, thereby</p>	<ul style="list-style-type: none"> The changes update the existing provisions to achieve consistency with the HRFMP and MRFHA. 	<ul style="list-style-type: none"> The resource consent process imposes a monetary cost on landowners and developers.

POLICIES	EFFECTIVENESS & EFFICIENCY	BENEFITS	COSTS
<p>environmental character and constraints of the land and surrounding area. These have been based on previous policies for the land and negotiation with the landowners and other parties. Linkages to the Hutt River walkway and the Silverstream Railway Station may be important components of future development.</p> <p>The rules for these areas require that any development be serviced with appropriate access to existing services and roads. In a major flood event, structures could impede the flood flow, putting people, buildings, roads or services in danger. Accordingly, activities that are relatively free of structures are appropriate for the part of the site in the flood plain or have appropriate flood risk management measures in place, are suitable for the part of the site in the Flood Hazard Area. However, special requirements: Particular controls are also included in relation to building floor levels, roads and services, so that structures may be developed as long as they are designed to appropriately manage the risk for protection from future floods within a 1-in-100-year return period. The Flood Hazard Area (as shown in the Planning Maps).</p>	<p>taking into account flooding hazards. The amendments also make reference to the new 'Flood Hazard Area', rather than the 1 in 100 year flood extent, thereby linking the policy to the proposed method of displaying the District Plan's spatial information that pertains to the flood hazard.</p>		
<p>Relevant objective: Objective 8.3.3 Provision for a range of activities on the St Patrick's Estate Area which avoids, remedies or mitigates any adverse effects on its visual amenity, on the neighbouring community, services and roading infrastructure, and takes into account the flooding hazards.</p> <p>Appropriateness for achieving the objective: The proposed amendment to the existing explanatory text address of the adverse effects resulting from flood hazards.</p>	<p>The proposed new policy is efficient and effective as it acknowledges the development potential of the St Patrick's Estate</p>	<ul style="list-style-type: none"> The changes acknowledge the development potential of the St Patrick's Estate 	<ul style="list-style-type: none"> The resource consent process imposes a monetary cost on landowners and
<p>New Policy: Policy 8.4.6 To provide for appropriate subdivision and development within the St. Patrick's Estate Area, ensuring that any subdivision or development appropriately manages the</p>			

POLICIES	EFFECTIVENESS & EFFICIENCY	BENEFITS	COSTS
<p>floor risk to the site.</p> <p>Appropriate management of the flood risk in this area must be consistent with the accepted flood protection standard as specified in the Hutt River Floodplain Management Plan, October 2001. This would provide for the same level of risk which has been adopted for the rest of the Hutt Valley.</p> <p>Any new development should occur outside of the River Corridor. However, in this location it has been recognised that with appropriate mitigation of the flood risk, development of the site could occur. Any development in this area shall be designed and built so as to ensure habitable buildings and access to the habitable buildings will be free of inundation from a flood of a 2300 cumec magnitude. Stopbanks are not considered to be an appropriate flood management measure. However, non-structural measures, such as raising the ground level of the site, would be considered appropriate.</p>	<p>site, whilst stating a requirement that appropriate flood risk management measures must be implemented. A key tenet of the HRFMP is the avoidance of further use of structural measures (eg stopbanks) to mitigate flood risk. This message is iterated through the explanatory text to the proposed policy, thus providing clear guidance on this issue.</p>	<p>Area, whilst providing guidance regarding the implications of the flood hazard in respect of any future development proposals</p> <ul style="list-style-type: none"> The changes update the existing provisions to achieve consistency with the HRFMP and MRFHA. 	<p>developers.</p>
<p>Relevant objective: Objective 8.3.3 Provision for a range of activities on the St Patrick's Estate Area which avoids, remedies or mitigates any adverse effects on its visual amenity, on the neighbouring community, services and roading infrastructure, and takes into account the flooding hazards.</p> <p>Appropriateness for achieving the objective: The proposed policy and corresponding explanatory text assists in achieving this existing objective as it recognises that the St Patricks Estate site may be suitable for subdivision and development in the event that appropriate flood risk management measures to address of the adverse effects resulting from flood hazards are put in place.</p>	<p>The proposed amendment to the policy is efficient and effective as it corrects an error in the policy wording, which incorrectly seeks to mitigate all potential adverse effects of natural hazards, as it is</p>	<p>The proposed changes provide clarity by clearly identifying the areas of the City subject to flooding by the Hutt and Mangaroa Rivers.</p> <ul style="list-style-type: none"> The resource consent process imposes a monetary cost on landowners and developers. 	
<p>Policy 14.4.1 To identify and mitigate the potential adverse effects of natural hazards that are a potentially significant threat within Upper Hutt.</p> <p>Adequate information is necessary to make informed</p>			

Comment [AB1]: Would be useful to suggest what would be appropriate measure(s)

Comment [TB2]: No we don't think so...

POLICIES	EFFECTIVENESS & EFFICIENCY	BENEFITS	COSTS
<p>decisions on developments that may be affected by natural hazards. The main objective relating to natural hazards is knowing where they can occur so that the effects can be avoided, or the appropriate management strategies can be put in place.</p> <p>The Council will co-ordinate the provision of information identifying these hazards and the areas at risk. This can be used by developers, the community and the Council to consider the potential risks when making decisions on developments and deciding on possible mitigation management measures where natural hazards are involved.</p> <p>Flood hazard areas are shown on the Planning Maps, using information obtained from the Wellington Regional Council with further details of the flood hazard shown on the maps in Chapter 33. Four different types of flooding hazard areas are identified on the maps in Chapter 33, based on the information known about the rivers and their corresponding flood hazards. These areas are: the river corridor, building setback line, overflow path and ponding areas.</p> <p>Activities relating to emergency services, the storing of bulk hazardous substances and establishing key network facilities will be discouraged from siting in high-risk areas, including being restricted in the river corridor. The flood hazard area is an unsuitable location for these sorts of activities because they expose the community to potentially significant risks to health and safety, and ongoing community function.</p> <p>Relevant objective: Objective 14.3.1 The avoidance, remedying or mitigation of the adverse effects of natural hazards on the environment.</p>	<p>impossible.</p> <p>The proposed amendment to the corresponding explanatory text is efficient and effective as it updates the provisions to introduce the proposed new spatial flood hazard overlays, and provides guidance as to activities that may be unsuitable in areas subject to significant flood hazards, which in turn aligns the Plan with the relevant GWRC flooding documents.</p>	<ul style="list-style-type: none"> • Ensure that storage of bulk hazardous substances will not be adversely affected by flooding. • Ensure that key emergency services and infrastructure will not be adversely affected by flooding. 	
<p>Appropriateness for achieving the objective: The proposed amendments to the policy and corresponding explanatory text assists in achieving this objective as they provide a greater level of guidance as to</p>			

POLICIES	EFFECTIVENESS & EFFICIENCY	BENEFITS	COSTS
<p>activities that may not be suitable in areas subject to significant risk from flooding, and introducing a more detailed method of spatially depicting the flood hazard, thereby strengthening the existing provisions.</p> <p>Policy 14.4.2 <i>In areas of known susceptibility to natural hazards, subdivision, development and activities are to be designed and located to avoid, remedy, or mitigate, where practicable, adverse effects of natural hazards.</i></p> <p><u>This policy seeks to limit the adverse effects of natural hazards and reduce the risk of natural hazards by avoiding inappropriate subdivision and development in hazard prone areas. Where development in hazard prone areas cannot be avoided then appropriate mitigation measures must be implemented to ensure the risk to people, property and the environment is reduced to an acceptable level.</u></p> <p><u>With respect to potential flood and/or erosion hazards and fault hazards, mitigation measures may include (but are not limited to) setting appropriate separation distances from the hazard, strengthening buildings and structures, elevating floor levels for habitable buildings or in certain cases raising of the ground to an acceptable level may be appropriate.</u></p> <p><u>Mitigation measures such as the construction of stopbanks or other structural engineering solutions can have wider, significant environmental effects and are not the preferred first option in mitigating flood hazards.</u></p> <p><u>When determining the appropriateness of a proposed mitigation method, the potential adverse effects on other properties must also be taken into consideration. In</u></p>	<p>The proposed amendment to the policy is efficient and effective as it introduces a requirement for subdivision within the flood hazard area to be designed with consideration for the flood hazard. This is considered to be an appropriate requirement given the expectation for a development entitlement that often follows subdivision.</p> <p>The proposed amendment to the corresponding explanatory text is efficient and effective as it further reinforces the expectations of the policy in respect of appropriate subdivision and development in areas subject to flood hazards.</p>	<ul style="list-style-type: none"> Subdivision within the flood hazard area will now be required to include measures to address the flood hazard. The subdivision will be required to demonstrate that future development can occur on the site that is clear of the flood hazard. 	<ul style="list-style-type: none"> Although all subdivision is currently required to be considered by Council through the resource consent process, the proposed change will place additional requirements on the subdivider which may impose a monetary cost.

Comment [AB3]: Requires definition

POLICIES	EFFECTIVENESS & EFFICIENCY	BENEFITS	COSTS
<p>addition, any effects on an existing risk management protection system must be taken into account. This policy lessens the risk factor by restricting developments in hazard prone areas. These controls include appropriate separation distances from a river or fault or designing structures and site development to meet acceptable levels of safety. This also enables applicants to consider the potential risks when making decisions on developments.</p> <p><u>The effects of permitting more intensive subdivision (and subsequent development and infrastructure) could be substantial and controls on subdivision can reduce these.</u></p> <p><u>In areas susceptible to hazards the Council will also discourage activities such as emergency services, the storage of bulk hazardous substances, and, where practicable, key network facilities services critical for the ongoing function of utility services (e.g. electricity transformers, water and wastewater pumping facilities).</u></p> <p><u>Section 106 of the Act also provides Council with the opportunity to decline subdivision consents where there is likely to be material damage to land and structures from erosion, subsidence, slippage or inundation from a river source. Provision must be made for safe access routes to and from a site. Adequate measures must be implemented to ensure that evacuation and emergency services can access a site without any unnecessary risk.</u></p>			
<p>Relevant objective: Objective 14.3.1 The avoidance, remedying or mitigation of the adverse effects of natural hazards on the environment.</p>			

POLICIES	EFFECTIVENESS & EFFICIENCY	BENEFITS	COSTS
<p>Appropriateness for achieving the objective: The proposed amendments to the policy and corresponding explanatory text assists in achieving this objective as they update existing provisions to include subdivision more effective guidance as to mitigation measures that may be considered appropriate.</p> <p>Policy 16.4.1 To ensure that the establishment, operation, maintenance and upgrading of essential utilities in the City avoids remedies or mitigates any adverse environmental effects.</p> <p>The City is dependent upon the efficient provision of facilities and services to maintain people's health and safety and to support economic, social and cultural activities. There should, therefore, be opportunity to provide for the development, maintenance and use of essential facilities and services, as long as they can meet, or do not significantly compromise, environmental standards. This includes standards to address the potential adverse effects that are specific to utilities and services, such as the impacts of transmission lines and sewage disposal systems. The underground installation of facilities and services will be promoted where appropriate, in order to help avoid, remedy or mitigate adverse effects, especially on visual amenity. Where utilities are required to be sited above ground, the site or route selection process should seek to minimise adverse environmental effects.</p> <p>Subdivision may be required to provide for special facilities or activities (such as substations, transformer sites, pumping station sites, and roads). There are therefore subdivision standards in each zone which recognise the special subdivision requirements for utilities.</p> <p>Utilities can both be affected by flooding, and affect flood patterns. Therefore, it is appropriate that the location of utilities in flood prone areas is regulated (Chapter 33). <u>Utilities (such as electricity transformers, water and</u></p>	<p>The proposed amendment to the explanatory text is efficient and effective as it provides greater guidance as to the essential services that should be located or designed in a manner that ensures that their continuing operation is not compromised in a flood event.</p>	<ul style="list-style-type: none"> Utility operators will be provided with greater guidance as to which services should not be compromised by the flood hazard. The community will benefit from the continuing operation of essential services during a flood event. 	<ul style="list-style-type: none"> In retaining the status quo the placement of essential services in some inappropriate flood risk areas of the Mangaroa catchment can continue. The resource consent process imposes a monetary cost on landowners and developers.

POLICIES	EFFECTIVENESS & EFFICIENCY	BENEFITS	COSTS
<p>wastewater pumping facilities and telecommunications facilities) should be located outside the Flood Hazard Area depicted on Planning Maps, to minimise the risk of their continuing operation being compromised during a flood event.</p>			
<p>Relevant objective: Objective 16.3.1 The sustainable management of physical infrastructure so that it can meet both the needs of today's community and the reasonably foreseeable needs of future generations.</p> <p>Appropriateness for achieving the objective: The proposed amendments to the explanatory text assists in achieving this objective by providing greater guidance as to the particular infrastructure services that should not be compromised in a flood event.</p>			

- 5.2 In respect of rules, the overarching goal of the proposed changes to the District Plan rules is to ensure people and inappropriate new development are kept away from flood waters. Changes are proposed to the rules within the Earthworks & Vegetation Clearance, Utilities, Flooding & Fault Band Hazards, Hazardous Substances & Contaminants, and Definitions chapters. These are considered in the table below.

Evaluation of proposed rules and other methods for achieving the objectives

- 5.3 During the preparation of this plan change the following three options were considered:

Option 1: Do nothing (i.e. retain the existing Plan provisions).

Option 2: Insert the new flooding information into the Plan by updating the Planning Maps to show the 1 in 100 year flood extent across the Hutt and Mangaroa Rivers, but retain existing activity status, standards and matters for consideration.

Option 3: Insert the new flooding information into the Plan by updating the Planning Maps to show the Flood Hazard Area and depicting the 4 'sub-areas' of the river on separate hazard maps, in addition to refining the existing policy framework and amending the activity status and standards for activities occurring in the Flood Hazard Area to address the issues arising from earthworks, subdivision, inappropriate development, essential services and hazardous substances & contaminants in the Flood Hazard Area. Provide relevant definitions for clear interpretation of new terms.

(Option 3 is the preferred option).

- 5.4 The following table summarises methods for achieving the relevant objectives.

METHODS	EFFECTIVENESS & EFFICIENCY	BENEFITS	COSTS
<p>1. Status quo</p>	<p>Limited</p> <ul style="list-style-type: none"> The principal District Plan objective pertaining to hazards seeks to address the issue of flood hazard through "the avoidance remedying or mitigation of the adverse effects of natural hazards on the environment". It is considered that, in light of the assessments undertaken by GWRC of the flooding and erosion risks posed by the Hutt and Mangaroa Rivers, currently this objective is not being effectively achieved. The existing rules and standards are effective and efficient insofar as they provide certainty for landowners and the community for activities occurring in the current 1 in 100 year flood extent for the Hutt River. The current District Plan rules do not include the flooding hazard information compiled by GWRC in respect of the Mangaroa River. Currently subdivision within the 1:100 year flood extent is not addressed in the Plan, with reliance on section 106 of the RMA. Currently erosion hazards caused by the Hutt and Mangaroa Rivers 	<ul style="list-style-type: none"> The District Plan currently provides some controls in the 1 in 100 year flood extent for the Hutt River. 	<ul style="list-style-type: none"> In retaining the status quo development in some inappropriate flood risk areas can continue. Developments within the flood hazard area can be a risk, as they can cause damage to property, danger to occupants, erosion and loss of land to the river and can have adverse effects downstream of the site. Landowners with existing development that is susceptible to the flood hazard may not be aware of the flooding risk present on their land. This has implications for the safety of occupants and may pose a monetary cost if the property is not appropriately insured when a significant flood event occurs. There would be significant costs to Council if it chose to ignore the flood hazard information detailed in the HRFMP and MRFHA. Council is required by Section 31(1)(b) of the Resource Management Act 1991 (RMA) to control any actual or potential effects of the use, development,

METHODS	EFFECTIVENESS & EFFICIENCY	BENEFITS	COSTS
	<p>are not addressed in the Plan.</p> <ul style="list-style-type: none"> Existing development is not addressed, leading to different standards for subdivision and existing development. 		<p>or protection of land, including for the purpose of the avoidance or mitigation of natural hazards. The flooding studies undertaken by the GWRC highlight the hazard posed by flooding of the Hutt and Mangaroa Rivers and the Council would be unwise to choose to ignore the studies.</p>
<p>Appropriateness for achieving the objectives: To retain the status quo will not provide the benefits that the proposed Plan Change would provide, as specified in this report.</p> <p>Option 1 is accordingly not recommended.</p>			
<p>2. Insert the new flooding information into the District Plan by updating the Planning Maps but apply the current standards for the 1 in 100 year flood extent to the Flood Hazard Area without any amendments to activity status, standards and matters for consideration</p>	<p>Limited</p> <ul style="list-style-type: none"> The principal District Plan objective pertaining to hazards seeks to address the issue of flood hazard through "the avoidance remedying or mitigation of the adverse effects of natural hazards on the environment". It is considered that, in light of the assessments undertaken by GWRC of the flooding and erosion risks posed by the Hutt and Mangaroa Rivers, this objective would not be effectively achieved. Subdivision within flood hazard area would not be addressed in the Plan, with reliance on section 106 of the RMA. Erosion hazards caused by the Hutt and Mangaroa Rivers would 	<ul style="list-style-type: none"> The change would result in limited regulatory controls for the 1 in 100 year flood extent for the Hutt River and Mangaroa River. 	<ul style="list-style-type: none"> To insert the spatial flood hazard information whilst retaining the current provisions would not include the erosion hazard information, nor would the river corridor, ponding area, or overlay path be depicted in the District Plan. Understanding the differing habits of the different parts of the river enables more targeted District Plan provisions and greater certainty for landowners regarding how a flood might affect their land.

METHODS	EFFECTIVENESS & EFFICIENCY	BENEFITS	COSTS
<p>Appropriateness for achieving the objectives: To insert the spatial flood hazard information whilst retaining the current provisions will not provide the benefits that the proposed plan change would provide, as specified in this report.</p> <p>Option 2 is accordingly not recommended.</p>			
<p>3. Insert the new flooding information into the District Plan by updating the Planning Maps to show the Flood Hazard Area and depicting the 4 'sub-areas' of the river on separate hazard maps, amending the activity status and standards for activities occurring in the Flood Hazard Area to address the issues arising from earthworks, subdivision, inappropriate development, essential services and hazardous substances & contaminants in the Flood Hazard Area. In addition, provide relevant definitions for clear interpretation</p>	<p>Effective & Efficient</p> <ul style="list-style-type: none"> The proposed plan change alters the Planning Maps to show the flood extent, shown on the maps as the Flood Hazard Area. The most significant changes occur to the maps for the Mangarua River, as the Plan does not currently have a flooding overlay for this area. More detailed maps, showing the different defined sub-areas (River Corridor, Overflow Path, Ponding Areas and Erosion Hazard Line) would be depicted on separate Hazard Maps that correspond directly to the Planning Maps. Rule 23.7 of the Earthworks and Vegetation Clearance chapter of the Plan would be altered to ensure that earthworks³ within the Flood Hazard 	<ul style="list-style-type: none"> The proposed plan change will provide a consistent and efficient approach to managing development in the flood and related erosion hazard areas. The proposed plan change has been written in such a way that any future information regarding flooding and erosion hazard risks in Upper Hutt (including information on other rivers) can be more easily inserted into the District Plan and displayed in a clear manner. The plan change addresses flooding issues that the District Plan does not currently 	<ul style="list-style-type: none"> The proposed changes will result in more restrictive provisions for some activities within the Flood Hazard Area, thereby limiting development that can be undertaken as of right on some properties. In order for sites within the Flood Hazard Area to be developed, adequate measures to mitigate the flood risk would be required to be implemented and assessed through the resource consent process. This would incur a monetary cost to landowners and a risk that the resource consent application is declined.

³ Earthworks are defined by the District Plan as... "the removal, relocation or depositing of soil, earth or rock from, to or within a site, including quarrying or mining and the deposition of clean fill, but excluding land disturbance resulting exclusively from domestic gardening and planting, cropping or drainage of land in connection with farming and forestry operations."

METHODS	EFFECTIVENESS & EFFICIENCY	BENEFITS	COSTS
	<p>Area should not be undertaken, and would require resource consent for a restricted discretionary activity. Criteria for whether earthworks will obstruct or divert the flow of flood water or result in erosion or inundation of the site or any other site will be added to rule 23.12. Earthworks, including filling and excavation, will be assessed through the resource consent process and required to mitigate adverse flood effects. Earthworks undertaken by a territorial authority for community flood protection purposes (including gravel extraction in the Hutt River) would not require resource consent.</p> <ul style="list-style-type: none"> The current earthworks provisions do not address issues caused by earthworks in areas subject to flood hazards. Such earthworks can cause significant adverse effects due to alterations to natural flow paths and increased sedimentation. It is considered that introducing the ability for Council to assess earthworks within the flood hazard area through the resource consent process would ensure that appropriate controls are put in place to mitigate adverse effects. 	<p>address, including subdivision, erosion hazard areas, earthworks and the construction of certain utilities. As a result, the District Plan would be consistent with the Hutt River Floodplain Management Plan and Mangaroa River Flood Hazard Assessment and will position the District Plan to give effect to the PRPS once operative.</p>	

⁴ Accessory building is defined by the District Plan as... "a building which is accessory to the main use of the site. On residential sites, this includes garages, carports, workshops, garden sheds, swimming pools, spa pools and glasshouses that are not used for commercial purposes other than home occupations. It also includes walls, fences and retaining walls defined as buildings".

METHODS	EFFECTIVENESS & EFFICIENCY	BENEFITS	COSTS
	<ul style="list-style-type: none"> • Rule 33.1 will be altered to ensure buildings, structures and subdivision within the flood hazard area are appropriately located and designed. Exposing new buildings to the flood hazard area represents unwise floodplain management planning. Seeking alternative sites away from the flood hazard area would be encouraged. For developments where flood hazard effects can be mitigated, appropriate mitigation measures would be considered through the resource consent process. • The proposed changes would allow construction of one accessory building⁴ with a floor area of 20m² or less per site within the Ponding Area to be undertaken as a permitted activity (subject to compliance with other existing standards such as setbacks from boundaries). This is more permissive than the current standards for the 1 in 100 year flood extent for the Hutti River, which requires resource consent for all buildings and structures within the floodplain. The proposed standard acknowledges that such structures are appropriate due to the nature of flood waters in the Ponding Area, the fact that accessory buildings are not habitable structures, and the restricted floor area would cause limited effects on the flow-path of 		

METHODS	EFFECTIVENESS & EFFICIENCY	BENEFITS	COSTS
	<p>flood waters.</p> <ul style="list-style-type: none"> Subdivision within the Flood Hazard Area is not accounted for in the operative provisions and will now be provided for in Chapter 33. The proposed standards would see subdivision within the Ponding Area assessed as a discretionary activity resource consent, and subdivision within the River Corridor, Overflow Path and on the river-side of the Erosion Hazard Line assessed as a non-complying activity. For subdivision to occur in these areas it would need to be demonstrated that flooding effects can be avoided or mitigated to ensure that the new allotment can be developed in a manner that does not expose future development to the flood hazard and does not adversely impact the passage of floodwaters, or alternatively it would need to be demonstrated that a proposal was consistent with relevant objectives and policies (the gateway test). The introduction of a requirement for resource consent for subdivision increases the District Plan's level of consistency with the HRFMP, MRFHA and the Proposed Regional Policy Statement. Rule 30.1 is proposed to be amended to ensure transformers, water and 		

METHODS	EFFECTIVENESS & EFFICIENCY	BENEFITS	COSTS
	<p>wastewater pumping stations and telecommunications facilities (excluding lines and cables) are either placed outside of the flood hazard area, or assessed as a discretionary activity resource consent to ensure that they are designed to withstand a flood event. During a flood event it is considered important that these services can continue to function, minimising the potential disruption to the City and emergency services.</p> <p>Rule 34.1 is proposed to be amended to ensure that the bulk storage of hazardous substances is either avoided in the Flood Hazard Area, or alternatively assessed through the resource consent process to ensure that the flood hazard effects are appropriately avoided or mitigated. This will ensure that the City's environmental quality is not compromised by the release of hazardous substances or contaminants during a flood event.</p> <ul style="list-style-type: none"> The definitions have been altered to include definitions of the different areas within the flood hazard area; being the River Corridor, Pounding, Overflow Path and the Erosion Hazard Line. The impact of flooding on these areas differs and the definitions explain the specific nature of the flood hazard in these areas. 		

METHODS	EFFECTIVENESS & EFFICIENCY	BENEFITS	COSTS
	<ul style="list-style-type: none"> The definition of 'Building' has been altered to provide a greater level of clarity to the current definition. The definition of 'structure' has been added. This definition has been taken from the RMA, but amended to fit into the District Plan. Definitions for Non-structural and Structural measures have been added to provide clarity on what is meant by these terms. The proposed changes to the definitions are important in applying the proposed changes to the District Plan as they provide guidance on the correct interpretation of new terms to be introduced to the Plan. The proposed changes provide the latest flooding predictions and information (from GW) for the Hutt River and the Mangaroa River flood extent, based on a 1 in 100 year return period flood event. The proposed changes would result in the inclusion of rules and standards that discourage inappropriate development from occurring within the flood hazard area; this is the desired outcome of both the UHCC and GWRC. The Mangaroa River flood extent is not currently included in the District Plan. 		

METHODS	EFFECTIVENESS & EFFICIENCY	BENEFITS	COSTS
	<p>The Mangarua River area is largely comprised of rural-zoned land and the existing pattern of development is typically low density. In light of this, it is considered opportune to implement the proposed plan change in order to avoid development in areas at high risk. This is in line with the principles of the HRFMP.</p> <ul style="list-style-type: none"> The current District Plan does not include information on the erosion hazards affecting the Hutt and Mangarua Rivers. Inclusion of erosion hazard information in the Plan will increase public awareness of the risk and ensure that buildings and structures are appropriately located and designed. The proposed changes will strengthen existing District Plan provisions to appropriately manage the effects of flooding and increase the Plan's consistency with other relevant policy documents such as the RPS and PRPS. 		
<p>Appropriateness for achieving the objectives:</p> <p>The proposed new provisions provide for the desired approach of UHCC and GWRC to floodplain management – being that any land use or development within a flood hazard area takes the flood risk into account; and either avoids or mitigates the flood risk. The proposed provisions are considered to be the most appropriate methods for achieving the relevant objectives.</p> <p>Option 3 is therefore recommended.</p>			

6.0 Incorporating the Proposed Provisions into the existing District Plan Structure

- 6.1 The District Plan currently presents rules and standards within five zone chapters and thirteen city-wide chapters, whereby the city-wide chapters are cross-referenced in the zone chapters. To avoid duplication of information and maintain consistency with the current District Plan structure it is considered most appropriate to insert the proposed rules and standards in the existing city-wide Chapter 33: Rules for Flooding and Fault Band Hazards, as the rules and standards would be applied across the zone chapters. Equally, changes to earthworks rules would occur within Chapter 23: Rules for Earthworks and Vegetation Clearance.
- 6.2 With regard to the spatial flood hazard area information, the option of showing the four map overlays (River Corridor, Overflow Path, Ponding Areas and Erosion Hazard Line) on the existing Planning Maps was considered, however displaying the information legibly presents significant challenges due to the amount of existing information presented on the current maps. It is considered that the most appropriate method of highlighting the flood hazard to plan-users is to depict a Flood Hazard Area on the existing Planning Maps to show the properties affected by flooding risk (similar to the existing 1 in 100 year flood extent). A separate set of Hazard Maps would depict the sub-areas (Ponding etc) to ensure that the information can be depicted as clearly as possible, and to avoid cluttering the existing Planning Maps. References alerting plan-users to the Hazard Maps would be included on each of the Planning Maps that contains a Flood Hazard Area overlay. This method of displaying the spatial information also provides the opportunity for further hazard information to be inserted into the Hazard Maps in the future and is thus considered the most appropriate method of displaying the flood hazard information, in the context of the current District Plan structure.

7.0 Conclusion

- 7.1 Proposed Plan Change 15 is a Council initiated plan change which introduces within the Operative District Plan map overlays with associated rules and assessment criteria to appropriately manage subdivision and development within the identified flood hazard areas of the Hutt and Mangaroa Rivers.
- 7.2 The purpose of the proposed plan change is to enable more appropriate management of land that is subject to flood hazards and seeks to implement the HRFMP and MRFHA whilst increasing consistency with the Operative and Proposed Regional Policy Statements.
- 7.3 In respect to Part 2 of the Resource Management Act 1991, there are no known matters of national importance (s6) or other matters (s7) relevant to the proposal. The plan change serves the purpose of the Act.
- 7.4 Three options were ultimately considered in respect of the proposed plan change – to take no action, to introduce the spatial flooding information to the Plan without amending the rules and standards, or to introduce the proposed changes. In accordance with the analysis required by section 32, the proposed changes are considered to be the most effective and efficient method of achieving District Plan objectives in addition to meeting Council's obligations set out by the Resource Management Act 1991.

