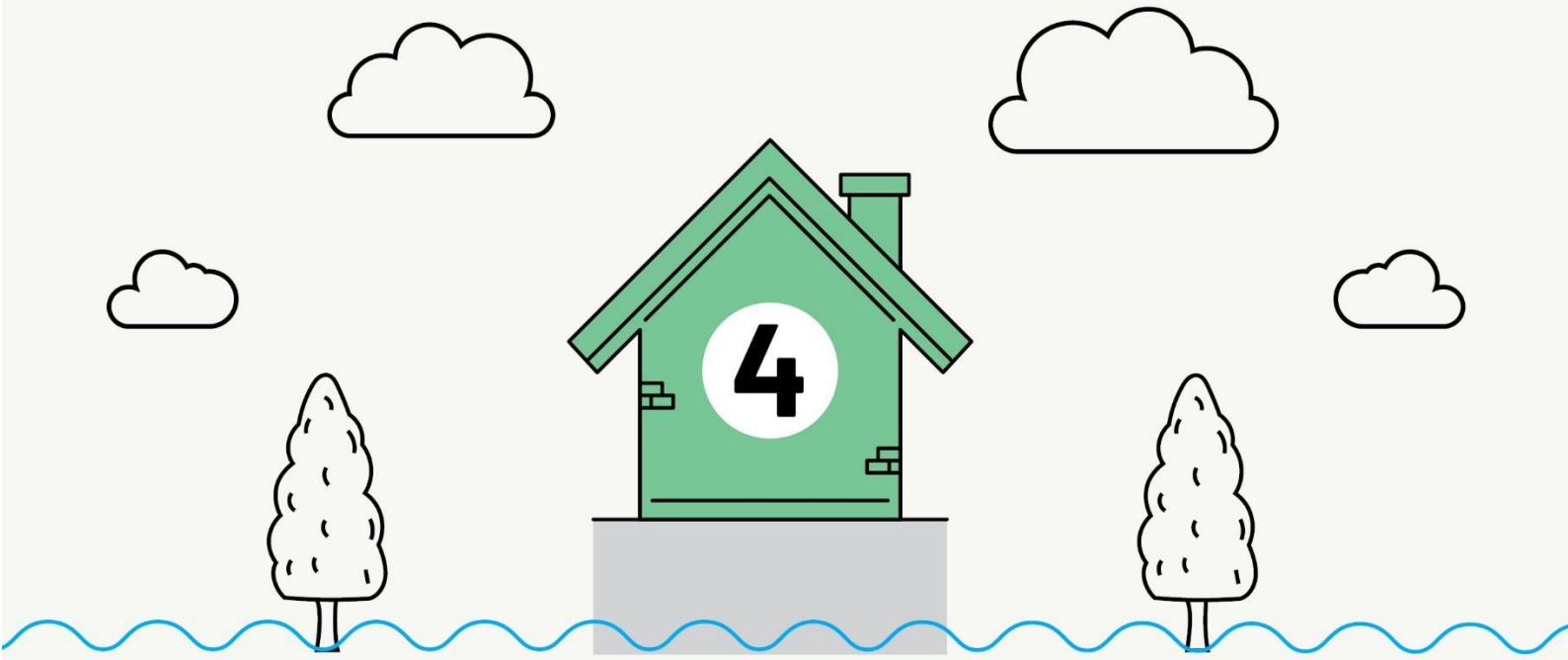

Proposed Plan Change 4 to the Whakatāne District Plan

Amendments to the Building Platform Level for Flood Risk Management and Mitigation

Section 32 Evaluation Report

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WHAKATĀNE District Council
Kia Whakatāne au i ahau

Section 32 Report Version control

Version	Date	Updated by	Reviewed by	Details
14.0		Stephen Allerby	Nicholas Woodley	Final

Department	Policy Planning
Project sponsor	David Bewley and Nicholas Woodley
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Appendices

Summary

The Whakatāne District Plan (District Plan) currently manages flood risk through Rule NH-R33, which requires building platforms to have freeboard above the level of a 1% AEP (Annual Exceedance Probability) design storm level. However, the rule has proven to be inefficient, particularly for redevelopment and infill projects in flood-prone urban areas. The rule mandates excavated/raised building platforms, which can cause water displacement, negatively impacting design and local amenities. Additionally, the rule also applies to building additions, including non-habitable rooms such as attached garages. Application of the rule in its current state can create impractical or undesirable results. Also, the need for full discretionary consent for alternative solutions is unnecessarily burdensome. Inefficiency is also caused by the rule referencing Section 4.3.5.2 of the NZS4404:2010 requiring District Plan users to comply with two different rules. As the Rule is not an exact match to the Standard, this creates unnecessary ambiguity for applicants.

To address these issues, the Whakatāne District Council (Council) is proposing Plan Change 4 (PC4) to the District Plan to make several amendments to Rule NH-R33. These amendments include aligning Rule NH-R33 with the intent and key components of Section 4.3.5.2 of the NZS4404:2010 to create a rule that is self-contained thereby eliminating the need to reference the Standard. Aligning Rule NH-R33 with the intent of Section 4.3.5.2 of the NZS4404:2010 allows for more flexible foundation solutions that reduce flood risk. PC4 also proposes to allow resilient rooms which are attached and not a habitable room in flood-prone areas, and allow minor additions or alterations to existing buildings in low flood risk areas. A restricted discretionary consent pathway with specific criteria for managing flood risk is also proposed for projects that do not meet the new standards proposed by PC4.

The changes proposed by PC4 aim to make the District Plan’s flood management framework more effective and user-friendly while maintaining necessary safety and flood risk mitigation standards.

1 Overview

1.1 Purpose

This report has been prepared to fulfil the statutory obligations of the Council in preparing an evaluation report under section 32 of the Resource Management Act 1991 (RMA) for a proposed plan change to the operative District Plan.

Under section 32 of the RMA, the Council is required to carry out an evaluation to examine the extent to which the objectives of the proposal are the most appropriate way to achieve the purpose of the RMA.

The evaluation must have regard to the efficiency and effectiveness of policies, rules and other methods in considering whether they are the most appropriate means of achieving the objective.

The evaluation must consider the benefits and costs associated with each policy, rule or method and the risk of acting or not acting if there is uncertain or insufficient information on the subject matter of the provisions.

This report should be read together with the District Plan.

1.2 Background / Need for Plan Change

1.2.1 Rule NH-R33

Rule NH-R33 manages the reduction of flood risk to a low level by requiring that all building platforms (other than those for detached and non-habitable accessory buildings) have freeboard above the level of the 1% AEP design storm level:

> *"All building platforms, other than those for detached and non-habitable accessory buildings, must account for flooding and include stormwater system designed in accordance with NZS4404:2010 Land Development and Subdivision Infrastructure, Section 4.3.5.2 or subsequent revision, provided that the minimum free board shall be measured to the building platform level, not the underside of the floor joists or underside of the floor slab."*

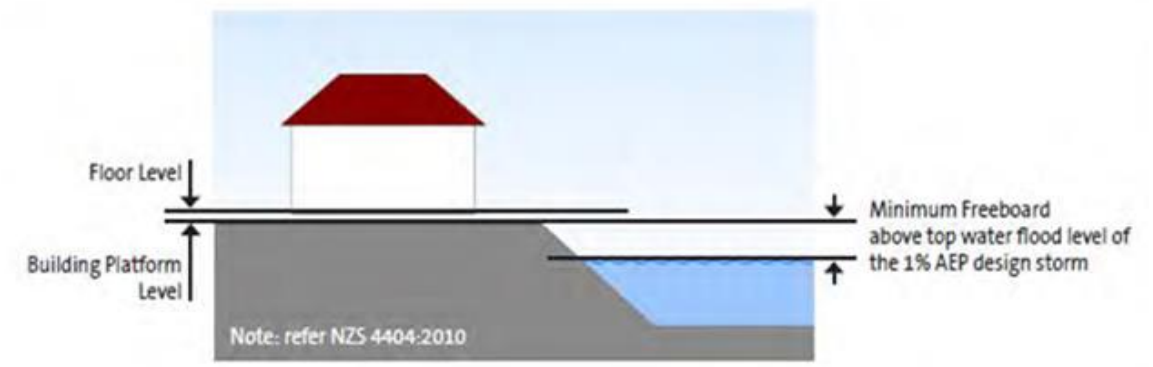

Figure 1 - NH-R33 Figure 56 Freeboard illustration (Whakatāne District Plan 2017)

Compliance with Rule NH-R33 is achieved by ensuring the minimum building platform level has a specified measurement of freeboard above the modelled 1% AEP design storm level.

Rule NH-R33 is inconsistent with Section 4.3.5.2 of the NZS4404:2010, which the rule references and states must be adhered to.

Rule NH-R33 states that the minimum freeboard:

> *"…shall be measured to the building platform level, not the underside of the floor joists or underside of the floor slab."*

Section 4.3.5.2 of the NZS4404:2010 states that the minimum freeboard:

> *"…shall be measured from the top water level to the building platform level or the underside of the floor joists or underside of the floor slab, whichever is applicable."*

This departure from NZS4404 was intentional, with the focus on enabling excavated/raised building platforms as the preferred development outcome.

Excavated/raised building platforms that are free of flooding can be efficiently created during the earthworks phase of greenfield or comprehensive development. However, in infill areas, site filling to create excavated/raised building platforms is often not feasible nor desirable due to space constraints, amenity effects, and the displacement or diversion of flood water onto other properties.

The rule as it stands requires that a resource consent for a discretionary activity is required to allow the use of piled foundations to raise a building platform level that is lower than the 1% AEP design storm level to a specified height that is above the 1% AEP design storm level plus any freeboard amount required. This is because the rule as written does not recognise the validity of using a pile foundation for flood protection.

The discretionary activity status is unreasonable as it provides a wide scope of assessment of a proposal when the only issue is flood risk. It also potentially adds unnecessary costs and delays in being able to undertake the building work.

The use of piled foundations to raise the building platform level above the 1% AEP design storm level plus freeboard is generally accepted as a desirable low risk construction method within an existing built environment and should be recognised accordingly by Rule NH-R33.

1.2.2 1% AEP design storm level

Rule NH-R33 and the associated diagram refer to freeboard above the "*top water flood level of a 1% AEP design storm*". The estimation of flood level requires the adoption of a range of factors and assumptions for modelling. This includes assumptions about climate change.

Given the flood map information sits outside the District Plan it is appropriate, for reasons of transparency, certainty and consistency, that the factors and assumptions for determining the 1% AEP design storm level be defined in the District Plan.

1.2.3 Rooms which are not a Habitable Room and Additions to Existing Buildings

In applying Rule NH-R33, there are circumstances where proposed building works to create rooms which are not habitable such as attached garages, and additions to existing buildings can result in undesirable or impractical outcomes including:

- The building platform level of any room cannot be lower than the floor level of the rest of the building even where the room is not habitable and constructed of materials that are resilient to flood damage; and
- The building platform level of a minor addition or alteration to an existing building may need to be higher than the existing building platform level, and in many cases, higher than the floor level of the existing building.

Both non-habitable additions and minor habitable additions and alterations to existing buildings have minimal effect on the overall level of risk from a flooding hazard. This is a particularly disproportionate issue when the scale of additions to existing buildings is small.

Non-compliance with Rule NH-R33 is a discretionary activity. The discretionary assessment of these activities is unreasonable because there is less certainty in the gaining of resource consent for the applicant as well as the burden of costs and delays in being able to undertake the building work. It is more efficient to focus the assessment for the resource consent application simply to those effects that the rule is seeking to address.

1.2.4 Rule NH-R33 referencing Section 4.3.5.2 of the NZS4404:2010

Rule NH-R33, which requires District Plan users to comply with Section 4.3.5.2 of the NZS4404:2010, introduces challenges due to ambiguous terms within that section. This ambiguity can lead to varied interpretations of Rule NH-R33, further complicating the assessment of compliance with the rule.

Additionally, Rule NH-R33 referring to Section 4.3.5.2 of the NZS4404:2010 creates a circumstance where the standard could be updated leaving the rule to make an incorrect reference, a situation that would create more ambiguity for District Plan users.

1.3 Scope of Plan Change

The scope of PC4 is to provide flood risk management and mitigation by:

- amending Rule NH-R33 to align with the key components of Section 4.3.5.2 of the NZS4404:2010 so reference to the Standard can be removed;
- adding a new definition for “1% AEP design storm level”;
- adding a new definition for “building platform level”;
- adding a new definition for “freeboard”;
- adding a new permitted activity rule that provides for any room, which is not a habitable room such as attached garages, with building platform levels below the 1% AEP design storm level plus freeboard; and
- adding a new permitted activity rule that provides for minor additions to existing buildings with building platform levels below the 1% AEP design storm plus freeboard.

2 Resource Management Act Policy Direction

2.1 Purpose and Principles

In carrying out a section 32 analysis, an evaluation is required of how the proposal achieves the purpose and principles contained in Part 2 of the RMA. Section 5 sets out the purpose of the RMA, which is to promote the sustainable management of natural and physical resources.

Sustainable management means managing the use, development, and protection of natural and physical resources to enable people and communities to provide for their social, economic and cultural wellbeing and for their health and safety, while –

- sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
- safeguarding the life-supporting capacity of air, water, soil and ecosystems; and
- avoiding, remedying, or mitigating any adverse effects of activities on the environment.

PC4 will manage the damage to life and property by improving the effectiveness and efficiency of rules that provide flood risk management for the purpose of protecting the health and safety, economic and social well-being of people and communities.

In achieving the purpose, decision-makers also need to recognise and provide for the matters of national importance identified in section 6, have particular regard to other matters referred to in section 7 and take into account the principles of the Treaty of Waitangi under section 8.

2.2 Section 6 – Matters of national importance

Section 6 outlines the matters of national importance including section 6(h) which requires Council to recognise and provide for the management of significant risks from natural hazards. This matter is directly relevant to the assessment of PC4.

Flooding is defined as a natural hazard under the RMA. The purpose of PC4 is to help Council more appropriately manage the significant risk from flood hazards.

2.3 Section 7 - Other matters

Section 7(i) of the RMA requires persons exercising functions and powers under the RMA to have particular regard to the effects of climate change. The effects of climate change are directly relevant to PC4.

Climate change rainfall projections for the Bay of Plenty region under Representative Concentration Pathways (RCPs) 4.5 and 8.5 estimate under both scenarios that by 2040, annual rainfall is not expected to change significantly overall, but the seasonality of rainfall is expected to change with spring and summer generally becoming drier and winter and autumn becoming wetter than the historic period. By 2090, annual rainfall totals are projected to decline under both scenarios. Similar to 2040, summer and spring rainfall is projected to decline, and winter and autumn rainfall is projected to increase[1].

[1] National Institute of Water and Atmospheric Research Ltd (2019). *Climate change projections and impacts for the Bay of Plenty Region.* Client report 2019218AK for Bay of Plenty Regional Council.

Flood level modelling takes into account the effects of climate change on rainfall and sea level over at least a 100-year timeframe.

2.4 Section 8 – Treaty of Waitangi

All persons exercising functions and powers under the RMA must take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

These principles are often referred to as partnership, protection and participation.

In this regard, consultation with iwi authorities has occurred in the development of this plan change as set out in section 4.3 of this report.

2.5 Section 30 – Functions of Regional Councils under the RMA

Section 30(1)(c)(iv) requires regional councils to control the use of land for the purpose of, "the avoidance or mitigation of natural hazards".

This is reflected in the Regional Policy Statement (RPS) Natural Hazards policies which sets out a comprehensive management framework for natural hazards designed to promote a risk based approach to both new and existing development.

PC4 gives effect to the RPS Natural Hazard policies.

Under Policy NH 13C: Allocation of responsibility for natural hazard identification and risk assessment:

- The Bay of Plenty Regional Council is responsible for susceptibility mapping for coastal inundation; and flooding from natural water courses outside urban areas with reticulated stormwater networks; and
- The Whakatāne District Council is responsible for susceptibility mapping for flooding from natural water courses inside urban areas with reticulated stormwater networks.

PC4 applies a risk-based approach to flood management. Application of PC4 to resource and building consent processes involves referencing flood modelling outputs from both the Council and the Bay of Plenty Regional Council. The flood modelling outputs identify geographic areas that are exposed or potentially exposed to risk from flooding over the next 100 years.

2.6 Section 31 - Functions of Territorial Authorities under the RMA

Section 31(1)(b)(i) sets out that the control of any actual or potential effects of the use, development, or protection of land, for the avoidance or mitigation of natural hazards is a function of territorial authorities under the RMA.

The purpose of PC4 is to directly assist Council in carrying out its function under section 31 of the RMA, to manage and mitigate the risk of flood hazards.

2.7 Section 74 – Matters to be Considered by Territorial Authority

Section 74(1)(a) sets out that territorial authorities must prepare and change their district plan in accordance with their functions under section 31 of the RMA.

The purpose of PC4 is to directly assist Council in carrying out its function under section 31 of the RMA, to manage and mitigate the risk of flood hazards.

2.8 National Policy Statements

Under s75(3)(a) of the RMA, a District Plan must give effect to any National Policy Statement. National Policy Statements provide national direction for matters of national significance relevant to sustainable management.

2.8.1 National Policy Statement on Urban Development 2020 (NPS-UD)

The NPS-UD aims to ensure that New Zealand's towns and cities are well-functioning urban environments that meet the changing and diverse needs of communities. This is the key NPS that is relevant to PC4.

The principal objective of the NPS-UD is:

Objective 1: *New Zealand has well-functioning urban environments that enable all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future.*

Objective 8, of the NPS-UD, seeks that *urban environments;*

a) support reductions in greenhouse gas emissions; and
b) are resilient to the current and future effects of climate change.

Objective 8 is supported by Policy 1 and Policy 6, which require that urban environments support the reduction of greenhouse gases and are resilient to the adverse effects of climate change.

PC4 gives effect to the NPS-UD by providing a more efficient and effective regulatory framework for managing the risk from flood hazards, taking into account climate change projections.

2.8.2 Other National Policy Statements

The other National Policy Statements that are currently in force but not relevant to the consideration of PC4 are:

- The National Policy Statement for Freshwater Management 2020 sets a national framework for how freshwater is to be managed across the country and Te Mana o te Wai is its "fundamental concept". Te Mana o te Wai is about respecting and looking after the water, so the water can look after you.
- The National Policy Statement for Renewable Energy Generation 2011 recognises the importance of renewable energy and applies to renewable energy generation activities at any scale. It covers the construction, operation and maintenance of structures associated with renewable electricity generation.

- The National Policy Statement for Electricity Transmission 2008 provides a high-level framework that gives guidance across New Zealand for the management and future planning of the national grid.
- The National Policy Statement for Highly Productive Land 2022 recognises the importance of the availability of highly productive land for food and fibre production by requiring highly productive land to be identified and managed to prevent its inappropriate subdivision, use and development.
- The National Policy Statement for Indigenous Biodiversity (NPS-IB) is an essential part of the response to biodiversity decline in New Zealand. The NPS-IB provides direction to regional and district authorities to protect, maintain and restore indigenous biodiversity requiring at least no further reduction nationally.
- The purpose of the National Policy Statement for Greenhouse Gas Emissions from Industrial Process Heat 2023 is to reduce emissions of greenhouse gases by managing the discharges to air of greenhouse gases from the production of industrial process heat, in order to mitigate climate change and its current and future adverse effects on the environment and the wellbeing of people and communities.

2.9 New Zealand Coastal Policy Statement 2010 (NZCPS)

Section 75(3)(b) of the RMA requires that a district plan gives effect to the NZCPS. The NZCPS guides regional and territorial authorities in their day-to-day management of the coastal environment.

Rule NH-R33 provides for freeboard for dwellings that are identified to be at risk from coastal flooding.

Coastal processes also impact on the hydrological cycles of rivers and streams further inland which can lead to increased flooding from rainfall events. This impact is addressed in flood modelling that will be used in the application of PC4 to assess development proposals.

Policy 25 of the NZCPS is the core policy on coastal hazards:

Policy 25: Subdivision, use, and development in areas of coastal hazard risk

> *In areas potentially affected by coastal hazards over at least the next 100 years:*
>
> a. *avoid increasing the risk of social, environmental and economic harm from coastal hazards;*
> b. *avoid redevelopment, or change in land use, that would increase the risk of adverse effects from coastal hazards;*
> c. *encourage redevelopment, or change in land use, where that would reduce the risk of adverse effects from coastal hazards, including managed retreat by relocation or removal of existing structures or their abandonment in extreme circumstances, and designing for relocatability or recoverability from hazard events;*
> d. *encourage the location of infrastructure away from areas of hazard risk where practicable;*
> e. *discourage hard protection structures and promote the use of alternatives to them, including natural defences; and*
> f. *consider the potential effects of tsunami and how to avoid or mitigate them.*

PC4 gives effect to Policy 25 of the NZCPS by requiring dwellings identified to be at risk from coastal flooding to raise the building platform level above the flood level, and by using a planning horizon of at least the next 100 years.

2.10 National Adaptation Plan (NAP)

The NAP is the Government's first step towards meeting the long-term vision and goals for a climate-resilient New Zealand. Section 74(2)(e) of the RMA requires that Council shall have regard to the NAP when it is preparing or changing the District Plan.

> *NAP Objective HBP1: Homes and buildings are climate resilient, and meet social and cultural needs.*

PC4 is consistent with Objective HBP1 as the changes sought by PC4 will enable the improvement of building stock and improve the ability of buildings to withstand inundation whilst allowing people to meet their social and cultural needs.

The NAP also recommends that when changing plans under the RMA, including giving effect to the provisions of the NZCPS, the Council should use recommended climate change scenarios.

In the development of PC4 regard has been given to the NAP as it gives effect to the provisions of the NZCPS and the modelling that informs the 1% AEP design storm level uses climate change scenarios recommended by current national guidance.

2.11 Emissions Reduction Plan (ERP)

The ERP sets out how New Zealand will reduce greenhouse gas emissions and slow the impacts of climate change. The ERP is based on five principles that set out how New Zealand can make a managed transition to a low-emission economy. Section 74(2)(d) of the RMA requires that Council shall have regard to the ERP in its plan making process.

Council can support the principles of the ERP by developing RMA-related plans that consider climate issues and the role that RMA plans have in reducing greenhouse-gas emissions. Council can also support the ERP principles by integrating RMA-related plans with non-RMA strategies.

"Our Climate Pathway" is a non-RMA strategy that sets the pathway for how Council and the community can work together to shape sustainable, low-emission, and climate resilient communities.

PC4 does not propose any changes to the way Council will reduce greenhouse-gas emissions; however, the changes proposed by PC4 will help address climate change adaptation issues and achieve an objective of Council's community climate strategy – "Our Climate Pathway" by ensuring future development in the District is climate resilient.

Regard has been given to the ERP in the development of PC4.

2.12 The Bay of Plenty Regional Policy Statement (RPS)

Section 75(3)(c) of the RMA requires the District Plan to give effect to the RPS. The RPS promotes the sustainable management of the Bay of Plenty Region's natural and physical resources and identifies the resource management issues facing the region.

Of particular relevance, changes made to the RPS by Change 2 (Natural Hazards), which became operative in July 2016, guide regional, city and district plans in managing land use and associated activities according to their level of natural hazard risk.

An analysis of the RPS and how it applies to PC4 is included in Appendix 2.

In summary, the proposed changes give greater effect to the RPS natural hazard policies through:

- Applying a risk-based approach[2] to flood risk management;
- The proposed rules will ensure that new development and redevelopment will be protected from flooding risk to an appropriate level; and
- The proposed rules will ensure that redevelopment will not increase the overall level of flood risk.

2.13 Regional Plans

Under section 75(4) of the RMA the District Plan must not be inconsistent with a regional plan for any matter specified in section 30(1).

2.13.1 The Bay of Plenty Regional Natural Resources Plan (RNRP)

The purpose of the RNRP is to promote the sustainable and integrated management of land and water resources within the Bay of Plenty. To achieve this, the RNRP has policies and methods (which include rules) to address issues of use, development and protection of land resources, geothermal resources and freshwater resources, including the beds and margins of water bodies.

Natural hazard Objective 49 seeks that the effects of flood hazards on the region's people, communities and natural and physical resources are avoided or mitigated.

The purpose of PC4 is to help Council appropriately manage the significant risk from flood hazards.

PC4 is not inconsistent with the RNRP.

2.13.2 The Bay of Plenty Regional Coastal Environment Plan (RCEP)

The RCEP promotes sustainable management of the natural and physical resources of the coastal environment incorporating values and issues for the coastal marine areas such as natural coastal hazards.

Objective 20 states that Coastal communities are aware of risks from natural hazards, and mitigation actions are in place to enhance the resilience of existing and future communities.

Policy CH 5 supports the RPS and NZCPS requirements of planning for at least 100 years.

The provisions proposed in PC4 will help the Council manage and mitigate the risk from coastal flooding and are not inconsistent with the RCEP objectives and policies.

2.14 Whakatāne District Plan 2017

The objectives and policies of the District Plan that are particularly relevant to PC4 are:

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[2] A risk based approach means land use planning interventions that consider, in a spatial sense, the likelihood of a natural hazard occurring and what the consequences would be in the affected area.

Strategic Objective SD-O1

Growth is encouraged in a carefully planned, sustainable way while minimising the impact on the environment, including existing communities; retaining the characteristics and values of the District; and managing risk by avoiding or mitigating natural hazards.

Strategic Objective SD-O5

A high level of community connectivity, resilience, health and safety.

Strategic Policy SD-P25: To avoid or mitigate the adverse effects of natural hazards on people, communities and infrastructure by managing the subdivision, use, development and protection of land.

Natural Hazards Objective NH-O1

Manage the subdivision, use, development and protection of land so as to avoid or mitigate the adverse effects of natural hazards on the life and wellbeing of people, and significant environmental values.

Policy NH-P3: To avoid or mitigate the adverse effects of the subdivision, use or development of land which is, or is likely to be, subject to material damage by erosion, falling debris, subsidence, slippage or inundation from any source.

Policy NH-P4: To avoid or mitigate the adverse effects of the subdivision, use or development of land that is likely to accelerate, worsen or result in material damage to that land, or other land, or structures, by erosion, falling debris, subsidence, slippage or inundation from any source.

Policy NH-P11: To manage the avoidance or mitigation of natural hazards according to their level of risk.

Objective NH-O2

To protect natural and physical resources and provide for the economic wellbeing and safety of people and communities by:

b. avoiding or mitigating the effects of coastal flooding on the use, subdivision and development of land in the Coastal Hazard Flood Policy Area (CHFPA); and

c. avoiding, remedying or mitigating the effects of land use, subdivision and development on the coastal environment.

Policy NH-P15: To ensure dwellings and habitable buildings located in the CHFPA are erected at or above the minimum building floor level identified for the site.

The objectives and policies of the District Plan are appropriate, and the outcomes sought are supported by PC4.

3 Other Relevant Legislation

3.1 Local Government Act 2002 (LGA)

The purpose of local government under s10(1)(b) of the LGA is "*to promote the social, economic, environmental, and cultural well-being of communities in the present and for the future*".

PC4 has been prepared to mitigate the damage to life and mitigate or minimise damage to property by managing land use and development on land susceptible to flooding, thus protecting the economic and

social well-being of communities. Through clarifying the rules for additions to existing buildings, PC4 better provides for the social and economic wellbeing of the community.

3.2 Civil Defence Emergency Act 2002

The purpose of the Civil Defence Emergency Management Act 2002 (CDEM Act) is to improve and promote the sustainable management of hazards in a way that contributes to the social, economic, cultural and environmental well-being and safety of the public and the protection of property.

The CDEM Act requires every regional council and every territorial authority within that region to unite to establish a Civil Defence Emergency Management Group (CDEM Group) and establish a Group Plan.

The CDEM Group Plan then sets objectives under each of the 4 Rs:

- planning and implementing risk *reduction*;
- maintaining a state of *readiness* (having the capacity and planning in place should an event occur);
- *response* at the time of a civil defence emergency; and
- overseeing *recovery* operations once an event has occurred.

Land use risk reduction policies within a CDEM Group Plan should be linked to a Regional Policy Statement, then down to regional and district plans.

Local authorities' RMA functions of avoiding or mitigating natural hazards contribute to the first of those "Rs" - risk reduction. The CDEM Group Plan outlines that reduction "*involves identifying and analysing risks to life and property from hazards: taking steps to eliminate these risks if practicable, and, if not reducing the magnitude of their impact and the likelihood of their occurrence to an acceptable level*."

The purpose of PC4 is to clarify the intent of Rule NH-R33 which provides the framework that allows Council to reduce the risk from flood hazards.

PC4 is consistent with the CDEM and the Bay of Plenty CDEM Group Plan.

3.3 Building Act 2004

The Building Act defines natural hazards as erosion, falling debris, subsidence, inundation (including flooding, overland flow, storm surge, tidal effects and ponding) and slippage.

As a building consent authority under the Building Act, Council must refuse to grant building consent if land is subject, to a natural hazard or if the building will accelerate, worsen or result in a natural hazard on the land or any other property.

However, Council may grant a building consent on land subject to, or potentially subject to, a natural hazard where it considers the building work will not accelerate, worsen or result in a natural hazard on the land or any other property, and it is reasonable for Council to grant a waiver from one or more provisions of the New Zealand Building Code.

The Building Code requires that all new dwellings, communal residential and communal non-residential buildings should, as per Clause E1.3.2, ensure that, "*surface water, resulting from an event having a 2% probability of occurring annually, shall not enter buildings*".

District Plan Rule NH-R33 applies a more stringent flood hazard control than that required by the Building Code by ensuring that surface water from a 1% AEP flood event does not enter buildings. This higher standard gives effect to the flood risk management criteria in the RPS.

4 Consultation

Under clause 3(1) of Schedule 1 to the RMA, local authorities are required to consult the Minister for the Environment, local authorities who may be affected by the plan, and the tangata whenua of the area who may be so affected, through iwi authorities.

4.1 Minister for the Environment

The Minister for the Environment has been advised of PC4 and feedback has been sought. No issues or concerns related to PC4 have been raised.

4.2 Bay of Plenty Regional Council

Consultation has occurred with policy staff of BOPRC to discuss matters relating to RPS compliance and matters relating to the proposed plan change. BOPRC staff have also been included in the section 32 report development, providing comments on the draft plan change documentation.

Comments received from BOPRC staff include:

- that there was no requirement for PC4 to undertake a full RPS risk assessment
- to define the 1% AEP storm event level;
- to describe how updated flood modelling would be taken into account;
- that the freeboard requirement has changed for any room that is not a habitable room such as attached garages and additions, and that this differs from BOPRC's recommend level which would include all components of freeboard; and
- that BOPRC have specified wording for freeboard, and confirmation that an addition under Rule NH-R33 would still need to meet the site permeability requirements of the General and Medium Density Residential Zones.

4.3 Advice from Iwi Authorities

Under clause 4A of Schedule 1 to the RMA local authorities are required to:

- Provide a copy of any draft policy statement or plan to any iwi authority previously consulted under clause 3 of Schedule 1 prior to notification;
- Allow adequate time and opportunity for those iwi authorities to consider the draft and to supply advice; and
- Have particular regard to any advice received before notifying the plan

Section 32(4A) requires evaluation reports prepared in relation to proposed policy statements and / or plans to include summaries of:

- All advice received from iwi authorities concerning the proposal; and

- The response to that advice, including any proposed provisions intended to give effect to the advice.

The following is a summary of the advice received from iwi authorities specific to the draft / proposed provisions evaluated within this report:

4.3.1 Te Rūnanga o Ngāti Manawa

Te Rūnanga o Ngāti Manawa (TRONM) feedback asked if the plan change will also provide flood maps and whether the District Plan will include rules about areas where housing can be built.

The Council responded to TRONM saying that flood maps were not part of PC4 which only has a narrow scope of amending an existing rule in the District Plan.

TRONM is supportive of PC4 moving forward as the Rūnanga recognises that protecting people and property from flood risk is important in a changing climate.

4.3.2 Te Rūnanga o Ngāti Whare

Te Rūnanga o Ngāti Whare has expressed no concerns and is supportive of PC4 moving forward.

4.3.3 Te Uru Taumatua

Te Uru Taumatua has expressed no concerns and is supportive of PC4 moving forward.

4.3.4 Te Manawa o Ngāti Rangitihi

Te Manawa o Ngāti Rangitihi has expressed no concerns and is supportive of PC4 moving forward.

4.3.5 Tūwharetoa mai Kawerau ki te Tai

The Council has attempted to engage with Tūwharetoa mai Kawerau ki te Tai and has provided the draft plan change information with no feedback being received.

4.3.6 Te Rūnanga o Ngāti Awa

Te Rūnanga o Ngāti Awa are supportive of the provisions proposed by PC4 and its intent.

4.3.7 Ngāti Mākino Iwi Authority

The Ngāti Mākino Iwi Authority has expressed no concerns and is supportive of PC4 moving forward.

5 Resource Management Issues Analysis

This section identifies the resource management issues that PC4 will address.

5.1 Rule NH-R33 - Minimum Building Platform Level

Council has identified that Rule NH-R33 is generally fit for purpose in greenfield or comprehensive development areas, but that it creates undesirable outcomes in existing urban areas (infill and redevelopment). The rule as it stands means that resource consent for a discretionary activity is required to use piled foundations to raise a building platform level that is below the 1% AEP design storm level to a specified height above the 1% AEP design level plus any freeboard required.

A definition of the 1% AEP design storm level is also needed to provide transparency, certainty and consistency in District Plan implementation.

5.2 Rooms which are not a Habitable Room and Additions to Existing Buildings

Under Rule NH-R33 the building platform level of any room, which is not a habitable room cannot be lower than the building platform level of the rest of the building. Rule NH-R33 can also require the building platform level of an addition to a building to be higher than the floor level of the existing building.

The outcome Rule NH-R33 currently provides is often impractical for rooms which are not a habitable room and additions to existing buildings where the building platform level is below the 1% AEP design storm level plus freeboard. Rooms that are not habitable and minor additions have minimal effect on the overall risk from the flooding hazard for an existing building or neighbouring properties.

This is a disproportionate issue when the scale of additions to existing buildings is minor and the additions have a minimal effect on overall risk from the flood hazard. However, non-compliance with Rule NH-R33 is a discretionary activity. As a discretionary activity, there is no restriction on the Council's discretion on what matters need to be considered. Applicants for discretionary resource consents therefore must lodge comprehensive applications for very minor alterations and additions. The limited scope of minor alterations does not warrant the comprehensive content required to satisfy a discretionary activity resource consent status.

5.3 Effectiveness and Efficiency of the District Plan Provisions

5.3.1 Objectives and Policies

The District Plan contains objectives, policies and rules relating to the management of natural hazards, including the inundation hazard.

Objective NH-O1 of the District Plan is to manage subdivision, use, development and protection of land to avoid or mitigate the adverse effects of natural hazards on the life and wellbeing of people, and significant environmental values.

The purpose of Rule NH-R33 is to manage and mitigate the adverse effects of the inundation hazard whilst also providing for the wellbeing of people.

Under the District Plan, all building platforms identified to be at risk from a 1% AEP design storm must comply with Rule NH-R33. The effectiveness of this rule has been compromised in that it requires a site to be filled to create a safe building platform. The rule is often not a practicable flood management method in existing areas of redevelopment or infill because earthworks needed to raise the level of a

site may cause the displacement of floodwater, creating a higher flood level, causing adjacent sites to receive more floodwater as a consequence.

Strict adherence to Rule NH-R33 also creates undesirable and impractical outcomes for rooms that are not habitable and minor additions and alterations to existing buildings that have minimal effect on the overall risk from the flood hazard.

6 Scale and Significance

Under section 32(1)(c) of the RMA, this evaluation report needs to:

"*contain a level of detail that corresponds to the scale and significance of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the proposal".*

The following scale and significance assessment discusses PC4 in terms of eight factors, and scores each high, medium or low. The ranking indicates where on the continuum of scale and significance the proposal falls. The assessment concludes with a summary and gives a final overall score for the scale and significance of PC4.

Criteria	Matters for consideration	Comments	Score
Reasons for the change	• Initiated locally plan effectiveness monitoring, community reaction to resource use etc	The reasons for the change are: There are terms in Rule NH-R33 that create undesirable outcomes for Council and District Plan users alike. Issues can be resolved through resource consents, but this is unduly onerous. Rule NH-R33 also creates circumstances where rooms that are not habitable and additions to existing buildings can result in unintended or impractical outcomes. Issues can be resolved through discretionary resource consents, but this is unduly onerous.	Low
Degree of shift from the current approach	• Addressing existing or new resource management issue • Proposing a new management regime/minor or major change in rule framework • Extent and scale of regulatory impact • Discrete provisions, or broader suite of existing provisions	One of the key themes of the District Plan is to create safe and resilient communities by providing for the ongoing management of natural hazards such as flooding. The Whakatāne District has experienced multiple, major flood events over the last 20 years and with climate change increasing the frequency and intensity of rainfall during autumn and winter which will increase the risk of flooding, it is important that the rule framework for flooding is coherent and able to achieve safe and resilient communities. PC4 is proposing a change in the rule framework for flooding that will provide clarity and improve outcomes for Council and District Plan users alike.	Low
Who and how many will be affected?	• Degree of public interest and engagement in issue • Degree to which proposal will address identified community outcomes • How many will be affected? Single landowner/multiple landowners/occupiers/neighbourhoods/businesses/cities/future generations • Degree of impact on private property	Rule NH-R33 applies to all building platform levels across the Whakatāne District (either existing or new), that are affected by the 1% AEP design storm level. The rules already apply to a large proportion of the Whakatāne District.	Medium

Degree of impact on, or interest from iwi/Māori	• Level of interest from iwi/Māori engagement with iwi on the issue • Likely degree of impact on iwi/hapū? • Impact on sites, areas or resources of significance to iwi/Māori • Degree of consistency with iwi management plans	Ngāti Awa Environment Plan Policy 7.1.4 – Require a precautionary approach is taken to enabling development along coastal areas and floodplains, particularly in relation to sea level rise and flood risk. The modelling that is used in the application of the flood hazard rules incorporates factors that reflect an appropriately cautious approach.	Low
When will effects occur?	• Temporarily (weeks or months) • For the next 1-5 years • Ongoing into the future	PC4 seeks to improve the current rule framework for flooding that will apply over the lifespan of the District Plan.	Low
Geographic scale of impacts	• Very localised or wide ranging (ie, single site/whole zones/one or more regions/single or multiple natural resources)	PC4 is a District wide plan change.	High
Type of effect	• Acute/chronic/temporary/cumulative/positive/negative/irreversible • Likelihood and consequence (eg, low probability, high consequence) • Part(s) of environment affected (ecosystems, infrastructure, amenity) • Degree of impact on social, cultural or economic well-being • Degree of impact (positive/negative) on Part 2 matters	PC4 will have an ongoing positive effect by managing and reducing the level of risk from flood hazards. PC4 will have a positive impact on RMA Part 2 matters as the plan change seeks to improve the management of flood risk. The changes proposed by PC4 will provide for the social, economic well-being and health and safety of people and communities over the long term.	Low
Degree of policy risk, implementation risk, or uncertainty	• Community reaction • Whether: ▪ novel, untested approach ▪ weak evidence base ▪ highly uncertain benefits and costs ▪ dependent on other initiatives (such as non-RMA mechanisms) ▪ challenging implementation timeframes	The approach to be applied has been implemented since the District Plan was made Operative in 2017 and the purpose of PC4 is to improve that approach. Control measures are conventional and follow contemporary practice elsewhere.	Low

Summary
The effects of climate change are resulting in a higher frequency and intensity of rainfall, increasing the risk of flooding across the Whakatāne District. The consequential increase in flood risk means it is important that the District Plan provides a robust and coherent rule framework for flood management which is the purpose of PC4. PC4 will have positive effects for Council and Plan users alike by providing for the social, economic well-being and health and safety of people and communities over the long term.
The above assessment concludes that the overall scale and significance of PC4 is Low. In accordance with s32(1)(c) of the RMA, this evaluation report is required to contain a level of detail that corresponds to the scale and significance of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the proposal.

7 Evaluation of Objective

Section 32(1)(a) requires that an evaluation report must examine the extent to which the objectives of the proposal being evaluated are the most appropriate way to achieve the purpose of the RMA.

Objective NH-O1 of the Operative District Plan is:

> *"Manage the subdivision, use, development and protection of land so as to avoid or mitigate the adverse effects of natural hazards on the life and wellbeing of people, and significant environmental values."*

Objective NH-01 is consistent with, and assessed as the most appropriate way to achieve, the purpose of the RMA which is to promote the sustainable management of natural and physical resources.

The meaning of sustainable management includes:

> *"managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural well-being and for their health and safety …"*

No changes are proposed to Objective NH-O1 of the District Plan and the evaluation of provisions will be undertaken against Objective NH-O1 of the District Plan.

The PC4 evaluation of provisions will be undertaken as options that summarise the analysis of a wider package of provisions.

8 Evaluation of Provisions (Options)

Section 32(1)(b) requires that an evaluation report must:

> *"…examine whether the provisions in the proposal are the most appropriate way to achieve the objectives by-*
>
> *i. identifying other reasonably practicable options for achieving the objectives; and*
> *ii. assessing the efficiency and effectiveness of the provisions in achieving the objectives; and*
> *iii. summarising the reasons for deciding on the provisions; and …"*

8.1 Options to Achieve Objective

8.1.1 Description of Options

Section 32(1)(b)(i) requires that an evaluation report must identify reasonably practicable options for achieving the objective. Three options were considered for achieving Objective NH-O1 of the District Plan.

The reasonably practicable options identified for evaluation are:

- Status quo

- Enabling
- Restrictive

Options are described below.

8.1.2 Option 1 – Status Quo

Retain the District Plan provisions as they are, as described above in the Resource Management Issues Analysis section. Retaining the status quo means accepting the current situation will perpetuate existing outcomes.

8.1.3 Option 2 – Enabling

Rule NH-R33 is amended to align with the key components of Section 4.3.5.2 of the NZS4404:2010 so its reference can be removed to allow a range of solutions that provide protection of buildings from adverse flood effects.

Buildings that are protected from flood hazards are a permitted activity.

Permitted activity conditions include the 1% AEP design storm level being less than 300mm and foul water drainage systems[3] must be protected from flood water ingress for the 1% AEP design storm level plus freeboard. A definition for 1% AEP design storm level is also included.

Any room, which is not a habitable room that is below the 1% AEP design storm level plus freeboard that complies with permitted activity performance standards is a permitted activity.

Minor additions and alterations to existing buildings below the 1% AEP design storm level plus freeboard that comply with permitted activity performance standards are a permitted activity.

Activities that do not comply with Rule NH-R33, and the permitted activity performance standards for rooms which are not habitable and additions to existing buildings will require resource consent as a restricted discretionary activity.

8.1.4 Option 3 – Conservative

Rule NH-R33 is amended to align with the key components of Section 4.3.5.2 of the NZS4404:2010 so its reference can be removed, allowing a range of foundation solutions that provide protection of buildings from adverse flood effects.

[3] Foul water, and foul water drainage systems as defined in the Building Code as: *Foul water - the discharge from any sanitary fixtures or sanitary appliances. Foul water drainage systems – drains, joints and fittings normally laid underground and used specifically for the conveyance of water from the plumbing system to an outfall*

Buildings that are protected from flood hazards are a permitted activity.

Permitted activity conditions include the 1% AEP design storm level being less than 300mm and foul water drainage systems must be protected from flood water ingress for the 1% AEP design storm level plus freeboard. A definition for 1% AEP design storm level is also included.

Any room, which is not a habitable room that is below the 1% AEP design storm level plus freeboard requires resource consent as a restricted discretionary activity.

Additions to existing buildings below the 1% AEP design storm level plus freeboard require resource consent as a restricted discretionary activity.

Restricted discretionary activities can be declined or granted (with or without conditions).

Activities that do not comply with Rule NH-R33 are a discretionary activity.

8.2 Analysis of Options to Achieve Objective

Section 32(1)(b)(ii) requires that an evaluation report must assess the efficiency of and effectiveness of the provisions (options) in achieving the objective. Section 32(2) outlines that the efficiency and effectiveness assessment must:

> *"An assessment under subsection (1)(b)(ii) must:*
> *a) identify and assess the benefits and costs of the environmental, economic, social and cultural effects that are anticipated from the implementation of the provisions, including the opportunities for-*
> *i) economic growth that are anticipated to be provided or reduced; and*
> *ii) employment that are anticipated to be provided or reduced; and*
> *b) if practicable, quantify the benefits and costs referred to in paragraph (a); and*
> *c) assess the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions."*

8.2.1 Evaluating Effectiveness

Effectiveness generally means consideration of the extent to which an intended outcome will be achieved by an option.

In this case, the relevant outcome against which effectiveness of an option should be assessed is:

- Provide a robust and coherent rule framework for flood hazard management that provides positive outcomes for the Council and District Plan users alike.

An option should be evaluated as reasonably effective and not fatally flawed before its efficiency is considered.

8.2.2 Evaluating Efficiency

The most efficient option will be the one that can achieve the outcome at least overall or net cost, taking into account all costs and benefits arising from the intervention. This is confirmed and emphasised by the Environment Court in Royal Forest & Bird Protection Society Inc v Whakatāne District Council [2017] NZEnvC 051[4].

The obligation under section 32(b)(ii) is to give effect to the objective in the least restrictive manner possible or at the least cost possible.

Hence the efficiency of options can be evaluated and compared by assessing the following:

a) Costs and benefits of establishing the provisions; and
b) Costs and benefits of compliance with the provisions.

[4] "(59) In considering what rule may be the most appropriate in the context of the evaluation and section 32 of the Act, we consider that notwithstanding the amendments that have been made to that section in the meantime, the presumptively correct approach remains as expressed in Wakatipu Environmental Society Inc v Queenstown Lakes District Council: that where the purpose of the Act and the objectives of the plan can be met by a less restrictive regime then that regime should be adopted. Such an approach reflects the requirement in section 30(1)(b)(ii) to examine the efficiency of the provision by identifying, assessing and, if practicable, quantifying all of the benefits and costs anticipated from its implementation. It also promotes the purpose of the Act by enabling people to provide for their well-being while addressing the effects of their activities.

8.3 Evaluation of District Plan Options

The following table evaluates the District Plan options in terms of their effectiveness and efficiency.

Costs (Environmental, Economic, Social and Cultural)	Benefits (Environmental, Economic, Social and Cultural)	Effectiveness / Efficiency
Option 1 - Status Quo		
The rule as it stands means that resource consent for a discretionary activity is required to use piled foundations to raise a building platform level that is below the 1% AEP design storm level to a specified height above the 1% AEP design level plus any freeboard required. The discretionary assessment of these activities creates social and economic costs due to less certainty in the gaining of resource consent for the applicant as well as the burden of costs and delays in being able to undertake the building work. Compliance with Rule NH-R33 means the building platform level of any room, which is not a habitable room cannot be lower than the building platform level of the rest of the building. Compliance with Rule NH-R33 means the building platform level of an addition to a building must be higher than the existing building platform level. Requiring compliance for additions results in internal stairs between the existing and new building platform level. There are health and safety implications as stairs are a trip hazard. Compliance with Rule NH-R33 and the discretionary assessment of non-complying activities provides a barrier to the improvement of the Whakatane District's housing stock and	There are no additional costs to Council through undertaking a plan change.	The efficiency and effectiveness of Rule NH-R33 has been compromised due to its inconsistency with Section 4.3.5.2 of the NZS4404:2010, and potential for undesirable outcomes as outlined in the Resource Management Issue Analysis section.

Costs (Environmental, Economic, Social and Cultural)	Benefits (Environmental, Economic, Social and Cultural)	Effectiveness / Efficiency
a built environment which is less resilient to climate change impacts. Compliance with Rule NH-R33 has social, cultural and economic costs for the community as it provides a barrier for people who are seeking to add value to their homes.		
Option 2 - Enabling		
Cost to Council of progressing plan change. People will need to familiarise themselves with a new rule framework.	The changes sought will better enable the improvement of building stock and improve the ability of buildings to withstand inundation whilst allowing people to meet their social and cultural needs. The changes sought will better provide for the social and economic wellbeing of the community by allowing people to add value to their homes and increase flood resilience with low compliance costs.	Amending Rule NH-R33 to be consistent with the key components of Section 4.3.5.2 of the NZS4404:2010 and including a definition for the 1% AEP design storm level removes uncertainty in the rule's application making it more effective. Adding permitted activity performance standards will improve the efficiency of Council's consenting processes. The use of restricted discretionary assessment criteria for activities which do not comply with permitted activity performance standards creates a more efficient consenting pathway as the matters over which Council has restricted its discretion are specified.
Option 3 - Conservative		
Cost to Council of progressing plan change. Costs to applicants for obtaining resource consents for attached garages and additions to existing buildings. People will need to familiarise themselves with a new rule framework.	The changes sought will enable the improvement of building stock and improve the ability of buildings to withstand inundation.	Amending Rule NH-R33 to be consistent with the key components of Section 4.3.5.2 of the NZS4404:2010 so its reference can be removed and including a definition for the 1% AEP design storm level removes uncertainty in the rule's application making it more effective. Proposals to build rooms which are not habitable and additions to existing buildings below the 1% AEP design storm level plus freeboard require a resource consent

Costs (Environmental, Economic, Social and Cultural)	Benefits (Environmental, Economic, Social and Cultural)	Effectiveness / Efficiency
		increasing the cost of compliance for these activities. The use of restricted discretionary assessment criteria for rooms which are not habitable and additions to existing buildings is an inefficient option when considering that these activities will have a minor increase on the overall level of risk from the flood hazard.

8.4 Risk of Acting or Not Acting

Risks of acting are low:

- Council is enabling further development within flood prone areas, which over the long term could expose more people to the risk of flood hazards. However, rooms which are not habitable and minor alterations and additions, new development and redevelopment will result in building platform levels being raised over time, thereby reducing the overall level of flood risk.

Risks of not acting are moderate:

- The existing District Plan provisions are not efficient or effective and will continue to create difficulty for Council and District Plan users alike; and
- The existing District Plan provisions will create undesirable and impractical outcomes for rooms which are not habitable and minor additions and alterations to existing buildings.

9 Preferred Option

Option 2 Enabling introduces an enabling rule framework and is assessed as the most efficient and effective option. An enabling approach can be more effective in achieving the desired natural hazard outcomes of Objective NH-O1 of the District Plan. The rules proposed by Option 2 will ensure that new development and redevelopment will be protected from flood risk to an appropriate level and will not increase the overall level of flood risk.

Option 3 Conservative will ensure that new development and redevelopment will be protected from flooding risk to an appropriate level; however, this option requires a restricted discretionary resource consent for additions to existing buildings and rooms which are not habitable. This high level of regulation reduces the efficiency of this option when these activities will have a minor increase on the overall level of risk to the flood hazard.

Option 1 Status Quo is an inefficient and ineffective outcome for Council and Plan users alike. The efficiency and effectiveness of Rule NH-R33 has been compromised due to its inconsistency with section 4.3.5.2 of the NZS 4404:2010. Rule NH-R33 as it stands requires that a resource consent for a discretionary activity is required to allow the use of piled foundations to raise a building platform level that is lower than the 1% AEP design storm level to a specified height that is above the 1% AEP design storm level plus any freeboard amount required. Any building platform levels including those for rooms which are not habitable and additions to existing buildings proposed to be below the 1% AEP design storm level plus freeboard do not comply with Rule NH-R33 and are assessed as a discretionary activity. It is unreasonable for activities which do not comply with the rule, to have a wide scope of assessment for the proposal when the only issue is flood risk.

9.1 Evaluation of proposed provisions for Option 2

The provisions applying to the preferred option are discussed below.

Definition/rule/assessment criteria	Comment
Definition – "Building Platform Level"	The addition of this definition will provide clarity and certainty for the Council and District Plan users alike.
Definition – "1% AEP design storm level"	The addition of this definition will provide clarity and certainty for the Council and District Plan users alike. The definition enables flood estimation to take into account the most up to date national guidance without a need to change the District Plan.
Definition – "Freeboard"	The addition of this definition will provide clarity and certainty for the Council and District Plan users alike.
Rule NH-R33.1 - Building Platform Level	Amending Rule NH-R33 to align with the key components of Section 4.3.5.2 of the NZS4404:2010 so its reference can be removed will provide more clarity in its application and improve outcomes for Council and District Plan users alike. Amending Rule NH-R33 will enable piled foundations to be used to achieve a building with the same level of protection as an excavated/raised building platform. This option will allow natural overland flow to occur rather than requiring stormwater and overland flowpath management around an elevated building platform. A table that includes the required minimum freeboard heights will provide clarity and certainty for Council and District Plan users as they will no longer need to use a separate standard to establish these heights. The inclusion of a description for how freeboard should be measured will provide clarity and certainty for Council and District Plan users alike. A 1% AEP design storm level of less than 300mm provides certainty that the activity will not be permitted if the flood risk to the safety of people is more than low. Defra and Agency[5] outline that flood depth below 300mm with a velocity of 0.3m/s or less, has a low degree of flood hazard. The Australian Institute for Disaster Resilience – Technical flood risk management guideline: Flood hazard; also outlines that

[5]. Defra and Agency. (May 2008). *Supplementary Note on Flood Hazard Ratings and Thresholds for Development Planning and Control Purpose – Clarification of the Table 13.1 of FD2320/TR2 and Figure 3.2 of FD2321TR1*. Department for Environment, Food & Rural Affairs & Environment Agency. Note: Defra or the Department for Environment, Food and Rural Affairs is a ministerial department of the Government of the United Kingdom. It is responsible for environmental protection, food production and standards, agriculture, fisheries and rural communities in the entire United Kingdom.

	a flood depth below 300mm with a velocity less than 2m/s is generally safe for people, vehicles and buildings[6]. Ingress of stormwater into foul water drainage systems adversely impacts the ability of the network to function during flood events. Protecting foul water drainage systems from floodwater ingress prevents overload of the wastewater system.
Rule NH-R33.2 – Exemptions from Rule NH-R33.1	Rule NH-R33.2 provides clarity and certainty to Council and District Plan users alike about what activities are exempt from the requirements of Rule-NHR33.1. The proposed rule allows for rooms, which are not habitable to have a lower building platform level than the rest of the dwelling. This means that there is limited risk to life. This activity would have previously been assessed as a discretionary activity. Providing permitted activity standards means the activities prescribed by Rule NH-R33.2 can be carried out without the need for a resource consent. For rooms, which are not habitable, using material that is resistant to inundation reduces flood risk to the building. Protecting foul water drainage systems from floodwater ingress prevents overload of the wastewater system. Requiring electrical work to be above the 1% AEP design storm level plus freeboard is the main life safety aspect. For additions, the proposed rule allows additions to have a building platform level matching the rest of the existing building thereby maintaining physical amenity for building users. For additions, the addition not being able to exceed 20m^2 in floor area provides certainty regarding the maximum size of additions allowed as a permitted activity. Limiting the increase in floor area, will not result in a significant increase in risk. No additional independent dwelling unit can be created under the rule. The 20m^2 limit is consistent with Rule NH-R7 Alterations and additions of existing building or structure in the CHEPA. For additions, a 1% AEP design storm level of less than 300mm on the site provides certainty that the activity will not

[6] Australian Disaster Resilience Guideline 7-3: Technical flood risk management guideline: Flood hazard, 2014, Australian Institute for Disaster Resilience CC BY-NC

	be permitted if flood risks to the safety of people are more than low. For additions, protecting foul water drainage systems from floodwater ingress prevents overload of the wastewater system. For alterations, the proposed rule provides certainty that alterations within the footprint of existing buildings will not be captured under Rule NH-R33.1.
Rule NH-AC8 – Building platform levels that do not comply with Rules NH-R33	A flood risk assessment provided by a suitably qualified and experienced practitioner as described in Appendix L of the RPS ensures that the content of the flood hazard consequence assessment complies with good practice and professional standards. The Council has the ability to accept or decline the application if there is no functional or operational need for the building platform level to be below the 1% AEP design storm level plus freeboard. The proposed matters of discretion require an assessment that ensures the onsite and offsite effects of flood displacement are managed, protecting people and property. The proposed matters of discretion require an assessment of whether the activity affects the storage and conveyance capacity of flood water further mitigating the effects the activity will have during a flood event. A condition requiring the safe evacuation or refuge for occupants if inundation occurs further mitigates the risk to life. The matters of discretion apply conditions that building materials, building systems and services are resistant to inundation, improving the resilience of the building if inundation were to occur. The matters of discretion apply conditions that measures must be taken to avoid objects being mobilised during a flood event, further mitigating the effects the activity will have during a flood event.

10 Conclusion

Council proposes a plan change to the District Plan to improve the efficiency and effectiveness of the performance-based framework the District Plan uses to manage and mitigate risk from flood hazards.

The evaluation of the effectiveness and efficiency of the options has concluded that Option 2, an enabling approach, is the preferred option. The enabling approach provides the best outcome with the greatest overall environmental, economic, social and cultural benefits, with strong alignment with Objective NH-O1 of the District Plan and is the most appropriate way to achieve the Plan Change objectives.

11 References

1. National Institute of Water and Atmospheric Research Ltd (2019). *Climate change projections and impacts for the Bay of Plenty Region.* Client report 2019218AK for Bay of Plenty Regional Council.
2. Defra and Agency. (May 2008). *Supplementary Note on Flood Hazard Ratings and Thresholds for Development Planning and Control Purpose – Clarification of the Table 13.1 of FD2320/TR2 and Figure 3.2 of FD2321TR1*. Department for Environment, Food & Rural Affairs & Environment Agency.
3. Australian Disaster Resilience Guideline 7-3: Technical flood risk management guideline: Flood hazard, 2014, Australian Institute for Disaster Resilience CC BY-NC.

Appendix 1: Proposed Plan Change 4 Provisions

Changes are shown with new text underlined and deleted text is shown as ~~strikethrough~~.

Add the following Definition – "Building platform level"

Building platform level

Means the NZ Vertical Datum height of the underside of a concrete floor slab, or, for a piled foundation, the underside of the floor joists.

Add the following Definition – "1% AEP design storm level"

1% AEP design storm level

*Means the level of the modelled 1% **annual exceedance probability** (AEP) event, that has taken into account the effects of climate change over at least a 100-year timeframe. Note: A range of climate change scenarios are able to be used.*

Add the following Definition – "Freeboard"

Freeboard

Means a provision for flood level design estimate imprecision, construction tolerances, and natural phenomena (such as waves, debris, aggradations, channel transition, and bend effects) not explicitly included in the calculations.

Amend the Following Rule:

Rule NH-R33 Building platforms for flood risk management and mitigation

Rule NH-R33.1

Except as provided for in Rule NH-R33.2, ~~A~~all ***building platform~~s~~ levels~~,~~*** *~~other than those for detached and non-habitable accessory building,~~ must account for flooding ~~and include stormwater system designed~~ to the* ***1% AEP design storm level*** *and include* ***freeboard*** *which is no less than that listed in Table 1, ~~in accordance with NZS4404:2010 Land Development and Subdivision Infrastructure Section 4.3.5.2 or subsequent revision~~ provided that; ~~the minimum free board shall be measured to the building platform level, not the underside of the floor joists or underside of the floor slab.~~*

a) ***freeboard*** *shall be measured from the* ***1% AEP design storm level*** *to the underside of the floor slab or underside of the floor joists as applicable; and*
b) *the* ***1% AEP design storm level*** *shall be less than 300mm above the level of the ground immediately below the* ***building*** *as proposed, as adjusted to include any fill or cut required for the* ***building****; and*
c) *foul water drainage systems connected to a Council reticulated wastewater network must be protected from flood water ingress for the* ***1% AEP design storm level*** *plus any* ***freeboard****.*

Advice note: Figure 56 provides guidance concerning the relationship between the ***1% AEP design storm level****,* ***freeboard*** *and the* ***building platform level****.*

NH-R33.2 Exemptions from Rule NH-R33.1 are;

a) *Any* ***accessory building*** *which is both detached and does not include a* ***habitable room****.*
b) *Any room, which is not a* ***habitable room****, and is attached to a* ***dwelling****, provided that:*
   (i) *the building elements of the room below the* ***1% AEP design storm level,*** *plus any* ***freeboard*** *as required under Rule NH-R33.1, must be constructed with materials resistant to periodic flooding; and*
   (ii) *electrical fittings must be above the* ***1% AEP design storm level*** *plus any* ***freeboard*** *as required under Rule NH-R33.1.*
c) *Any* ***addition*** *to any existing* ***building*** *that contains a* ***habitable room****, provided that;*
   (i) *the* ***1% AEP design storm level*** *shall be less than 300mm above the level of the ground immediately below the* ***building*** *as proposed, as adjusted to include any fill or cut required for the* ***addition*** *to the* ***building****; and;*
   (ii) *the* ***building platform level*** *of the* ***addition*** *must be at or above the existing* ***building platform level*** *of the* ***building****; and*
   (iii) *the floor area of the* ***addition*** *must not exceed 20m^2; and*
   (iv) *foul water drainage systems connected to a Council reticulated wastewater network must be protected from flood water ingress at the* ***1% AEP design storm level*** *plus any* ***freeboard*** *as required under Rule NH-R33.1.*

d) ***Alterations*** *to any existing* ***building,*** *provided that:*

(i) *the* ***alterations*** *are wholly contained within the existing* ***building****; and*

(ii) *the* ***alterations*** *do not result in the creation of any new or additional* ***dwelling*** *on the site; and*

(iii) *the* ***building platform level*** *of the alterations must be at or above the existing* ***building platform level*** *of the* ***building****.*

Include the following Table

NH-R33.3 – Table 1 Minimum Freeboard Height Requirements	
Dwellings and accessory buildings for habitation	*0.5m*
Commercial and industrial buildings	*0.3m*

Add the following Restricted Discretionary Activity

NH-AC8 ***Building platform levels*** *that do not comply with Rule NH-R33;*

1. Standards and Terms

a) A Flood Risk Assessment must be provided by a suitably qualified and experienced person as described in RPS Appendix L – Methodology for Risk Assessment. The Flood Risk Assessment must demonstrate the extent to which the proposal mitigates flood risk after the development is completed, including:

(i) other works to increase flood storage on the property;

(ii) the effects of any decrease in flood storage on the property;

(iii) the effects on the conveyance of water in overland flow paths and on other properties;

(iv) provision for safe evacuation and refuge of occupants in a flood event;

(v) resilience of the ***building*** *structure and materials to flooding;*

(vi) protection of ***building*** *systems and services from flooding.*

2. Council shall restrict its discretion to;

a) whether there is a functional or operational need for the ***building platform level*** *to be below the* ***1% AEP design storm level*** *plus* ***freeboard****, including the consideration of alternative locations and methods; and*

b) the degree to which the ***building*** *fails to comply with Rule NH-R33; and*

c) the extent to which the proposal mitigates flood risk after the development is completed, including:

(i) other works to increase flood storage on the property;

(ii) the effects of any decrease in flood storage on the property;
(iii) the effects on the conveyance of water in overland flow paths and on other properties;
(iv) provision for safe evacuation and refuge of occupants in a flood event;
*(v) resilience of the **building** structure and materials to flooding;*
*(vi) protection of **building** systems and services from flooding.*

Delete and replace NH-R33 Figure 56 Freeboard illustration with the following:

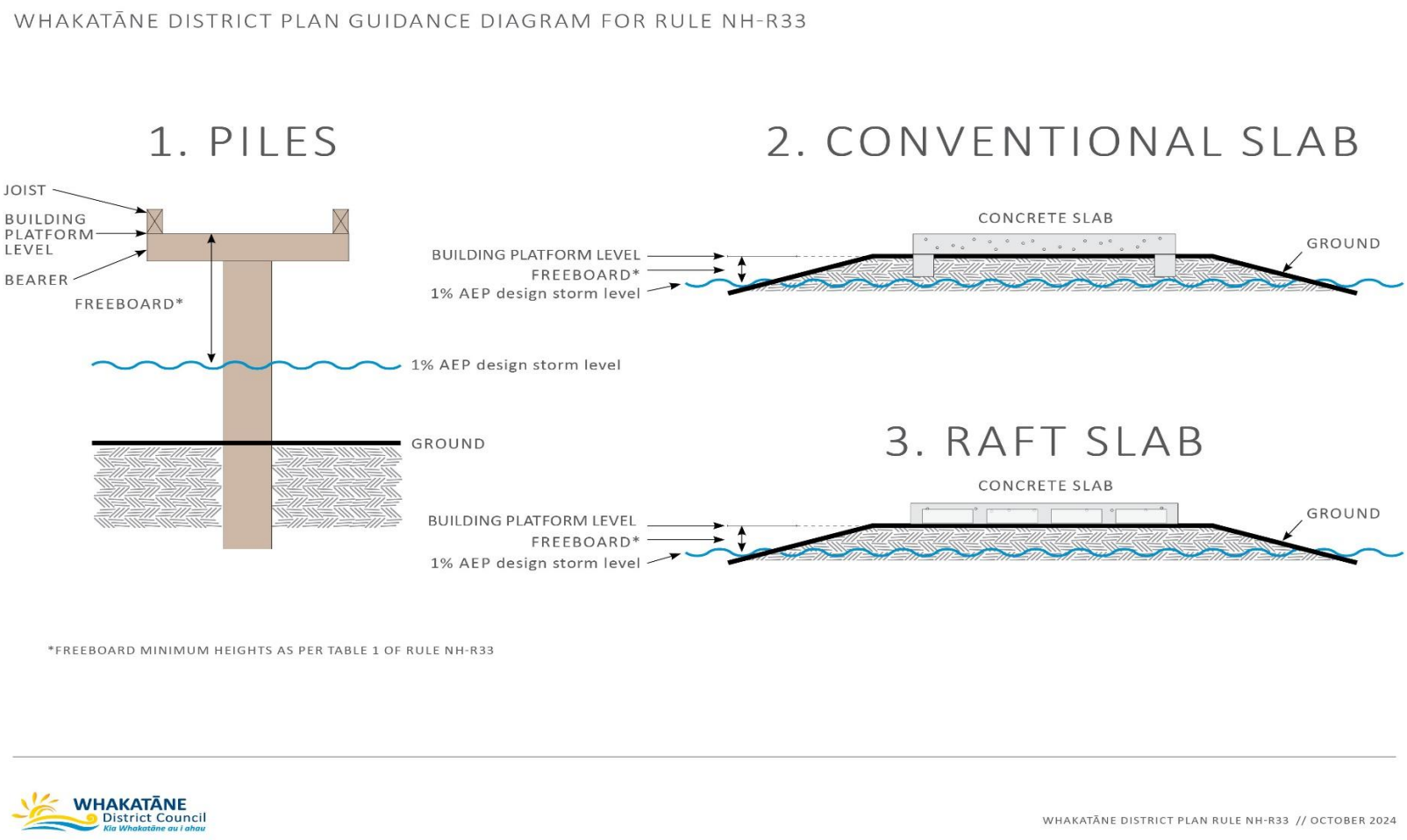

*Figure 2 - NH-R33 Figure 56 Freeboard illustration: Figure 56 provides guidance concerning the relationship between the **1% AEP design storm level**, **freeboard** and the **building platform level***

Appendix 2: PC4 RPS Analysis

Analysis of the Bay of Plenty Regional Policy Statement, in particular Natural Hazards, for Proposed Plan Change 4 (PC4) – Minimum Building Platform Level.

Policy		**Assessment of PC4 against policy**
Objective 31	Avoidance or mitigation of natural hazards by managing risk for people's safety and the protection of property and lifeline utilities	PC4 will avoid or mitigate natural hazards by managing risk for people's safety and the protection of property. Risk is managed by clarifying the intent of Rule NH-R33 and providing these outcomes: • amending Rule NH-R33.1 to align with the key components of Section 4.3.5.2 of the NZS4404:2010 so its reference can be removed, and allowing new buildings in floodable areas provided building platform levels are above the 1% AEP design storm level plus freeboard, and the 1% AEP design storm level presents a low risk; • adding a new rule NH-R33.2 that provides for activities in flood prone areas that are exempt from Rule NH-R33.1; • A restricted discretionary activity for other buildings in floodable areas, subject to consideration of need for and mitigation of risk. Risk is managed, by requiring that buildings in flood-prone areas are made from materials that can withstand inundation and additions to buildings are limited in floor area. Risk is managed through the need for resource consent and or building consent for building works.
Policy IR 2B: Having regard to the likely effects of climate change	Recognise and provide for the predicted effects of climate change having particular regard to:	PC4 is consistent with Policy IR 2B as the BOPRC and WDC modelling that informs the 1% AEP design storm level used for development control has the effects of climate change included.

	(a) Predicted increase in rainfall intensity, taking account of the most recent national guidance and assuming a minimum increase in the annual mean temperature of 2°C by 2090 (relative to 1990 levels); and (b) Predicted increase in sea level, taking into account the most recent national guidance and the minimum sea-level rise projections in Policy NH 11B.	
Policy NH 1B: Taking a risk management approach	Take a risk management approach to control the use, development and protection of land to avoid or mitigate natural hazards by assessing the level of risk according to the likelihood of natural hazards occurring and their potential consequences.	Policy NH1B provides the framework for the management of natural hazards. It applies to the development of plans and to the considerations of resource consent applications. The District Plan already takes a risk management approach to management of flooding and inundation. Building platform levels are required to be raised above modelled flood levels to achieve a low-risk outcome. PC4 takes a risk reduction approach to the management of land use, subdivision and development to ensure that the risk of flooding is avoided or mitigated over time. PC4 provides greater flexibility in controlling development on flood prone land and reduces compliance costs, while still achieving the same low risk outcomes.
Policy NH 2B: Classifying risk	Classify risk according to the following three category risk management framework as detailed in Appendix L: 1. High natural hazard risk being a level of risk beyond what should be tolerated; 2. Medium natural hazard risk being a level of risk that exceeds the Low level but does not meet the criteria for High risk;	The existing provisions in the District Plan reflect an earlier assessment of natural hazard risk. The purpose of PC4 is to clarify how the associated rules are implemented. The Council is progressing modelling to establish where there are levels of high, medium and low flood risk. The current status of the draft modelling indicates a level of medium risk from flooding for the Whakatāne Urban Area. In areas of known high risk, District Plan and Building Code provisions are applied to reduce the risk through the statutory consenting systems.

	3. Low natural hazard risk being the level of risk generally acceptable. The policy direction associated with these levels of risk is set out in Policy NH 3B Natural hazard risk outcomes.	Additions to buildings complying with the proposed permitted activity status do not increase the overall level of risk because there will be no change to the number of buildings functionally compromised after an event. Risk to buildings is also managed through the natural hazard provisions of the Building Act 2004.
Policy NH 3B: Natural hazard risk outcomes	By the application of Policies NH 4B and NH 12A, achieve the following natural hazard risk outcomes at the natural hazard zone scale*: (a) In natural hazard zones subject to High natural hazard risk reduce the level of risk from natural hazards to Medium levels (and lower if reasonably practicable); and (b) In natural hazard zones subject to Medium natural hazard risk reduce the level of risk from natural hazards to be as low as reasonably practicable; and (c) In natural hazard zones subject to Low natural hazard risk maintain the level of risk within the Low natural hazard risk range. *The risk outcome specific to new development on specific development sites is set out in Policy NH 4B.	Reducing risk from high levels will need to occur over time. These timeframes may span years or even decades in order to manage disruption and cost. This is particularly true when risk reduction relies on land development and redevelopment processes, as in this instance, that relate to design life of buildings and infrastructure.
Policy NH 4B: Managing natural hazard risk on land subject to urban development	Require a Low natural hazard risk to be achieved on development sites after completion of the development (without increasing risk outside of the development site) by controlling the form, density and design of: (a) Greenfield development; (b) Any urban activity within the existing urban area that involves the construction of new and/or additional buildings or reconstruction of or addition to existing	By clarifying the intent of Rule NH-R33, PC4 is not to increase natural hazard risk. Any new dwellings or other buildings will be required to have building platform levels elevated above the 1% AEP design storm level. PC4 is not increasing natural hazard risk by providing plan provisions for additions to existing dwellings.

	buildings (including any subdivision associated with such activities); and (c) Rural lifestyle activities; except that a Low level of risk is not required to be achieved on the development site after completion of the development where the development site is located within a natural hazard zone of Low natural hazard risk and that natural hazard zone will maintain a Low level of natural hazard risk after completion of the development.	
Policy NH 5B: Avoiding increasing and encouraging reducing natural hazard risk in the coastal environment.	Despite Policies NH 3B, NH 4B and NH 12A, ensure that on any land within the coastal environment that is potentially affected by coastal erosion or coastal inundation over at least the next 100 years: (a) no land use change or redevelopment occurs that would increase the risk from that coastal hazard; and (b) land use change or redevelopment that reduces the risk from that coastal hazard is encouraged.	PC4 clarifies the intention of Rule NH-R33 and does not increase the risk from coastal hazards.
Policy NH 6B: Exemptions from the natural hazard risk management approach	Policies NH 3B, NH 4B, NH 5B and NH 12A do not apply to the establishment, operation, maintenance and upgrading of activities that have more than low natural hazard risk or which are located in high and medium risk natural hazard zones if the activity: (a) Has a significant social, economic, environmental or cultural benefit to the community it services, or is a lifeline utility; and (b) Has a functional need for the location.	Significant Social Cultural buildings are subject to the Discretionary consent process where the natural hazards framework of the District Plan would be applied.

Policy NH 7A: Identifying areas susceptible to natural hazards	Identify natural hazards and the locations where those natural hazards could affect people, property and lifeline utilities by mapping hazard susceptibility areas for the following natural hazards: (c) Coastal/marine processes (i) coastal erosion; and (ii) coastal inundation. (d) Extreme rainfall (i) landslip and debris flow/flood; and (ii) flooding.	Council is undertaking an ongoing programme of modelling for fluvial, pluvial and coastal flooding to incorporate climate change scenarios. Outputs from the modelling will provide mapping of flood hazard susceptibility areas. The district plan rules will provide for floor levels elevated above the design flood levels output from the modelling.
Policy NH 8A: Assessment of natural hazard risk at the time of plan development	Assess natural hazard risk by: (a) Defining natural hazard zones within hazard susceptibility areas; and (b) Determining the level of natural hazard risk within each natural hazard zone by undertaking a risk analysis using the methodology set out in Appendix L; and (c) Classifying natural hazard risk within each natural hazard zone as either High, Medium or Low natural hazard risk using the methodology set out in Appendix L.	Policy NH 8A is an "A" policy and must therefore be given effect in the context of regional and district plan development. The existing provisions in the District Plan reflect an earlier assessment of natural hazard risk. The purpose of PC4 is to clarify how the associated rules are implemented.
Policy NH 11B: Providing for climate change	Incorporate the effects of climate change in natural hazard risk assessment. Authoritative up-to-date projections of changes in sea level, rainfall, temperature, and storm frequency and severity will be used as updated scientific data become available. Use the following projections as minimum values when undertaking coastal hazard assessments:	The Council's and BOPRC's assessment of flood hazard susceptibility incorporates climate change. PC4 is consistent with Policy IR 2B as the BOPRC and WDC modelling that informs the 1% AEP design storm level used for development control has the effects of climate change included.

	(a) A 100-year time frame; (b) A projection of a base sea-level rise of at least 0.6 m (above the 1980–1999 average) for activities/developments which are relocatable; (c) A projection of a base sea-level rise of 0.9 m (above 1980–1999 average) for activities where future adaptation options are limited, such as regionally significant infrastructure and developments which cannot be relocated; and (d) An additional sea-level rise of 10 mm/annum for activities with life spans beyond 2112.	
Policy NH 12A: Managing natural hazard risk through regional, city and district plans	Promote the natural hazard risk outcomes set out in Policy NH 3B by: (a) Providing for plans to take into account natural hazard risk reduction measures including, where practicable, to existing land use activities, and, where necessary, (b) Controlling the location, scale and density of the subdivision, use, development and protection of land and land use change in city, district and regional plans. (c) Ensuring that regional, city and district plan provisions provide a high degree of certainty for the establishing and maintaining of essential risk reduction works and other measures.	District Plan changes are proposed to improve the application of provisions that have the purpose of mitigating flood risk and provide natural hazard risk reduction. Rule NH-R33 will be amended to remove ambiguity surrounding the rule's application. The amendment that has been proposed will provide appropriate certainty to enable natural hazard risk reduction. Permitted activity criteria have been proposed that will allow an activity to be undertaken (that otherwise would have been discretionary). The provisions proposed will provide appropriate certainty to enable natural hazard risk reduction. A restricted discretionary status has been proposed that will allow an activity to be undertaken (that otherwise would have been discretionary). The provisions proposed will provide appropriate certainty to enable natural hazard risk reduction.
Policy NH 13C: Allocation of responsibility for natural hazard identification and risk assessment	Require the natural hazard identification and risk assessment approach described in Policies NH 1B, NH 2B and NH 7A to NH 10B above to be given effect to by:	WDC provides the 1% AEP design storm level for the Whakatāne urban area.

	(a) Regional council undertaking area-based natural hazard susceptibility mapping in accordance with Policy NH 7A for: (i) Hazards related to volcanic activity; (ii) Hazards related to earthquakes; (iii) Tsunami; (iv) Coastal erosion and coastal inundation; and (v) Flooding from natural water courses outside urban areas with reticulated stormwater networks. (b) Regional council undertaking area-based natural hazard risk analysis and evaluation in accordance with Policy NH 8A for: (i) Hazards related to volcanic activity; (ii) Liquefaction; and (iii) Tsunami. (c) City and district councils undertaking area-based: (i) Natural hazard susceptibility mapping in accordance with Policy NH 7A for those hazards listed in Policy NH 7A that are not listed in (a) above; and (ii) Natural hazard risk analysis and evaluation in accordance with Policy NH 8A for those hazards listed in Policy NH 7A that are not listed in (b) above	BOPRC provides the 1% AEP design storm level for natural water courses outside urban areas with reticulated stormwater networks and coastal inundation.

Policy NH 14C: Allocation of responsibility for land use control for natural hazards	The Bay of Plenty Regional Council, city and district councils shall be responsible for specifying objectives, policies and methods, including any rules, for the purpose of the control of the use of land for the avoidance or mitigation of natural hazards...on land except land in the coastal marine area: Responsibility for developing objectives and policies – City and District councils and Bay of Plenty Regional Council Responsibility for developing any rules – City and District Councils Responsibility for developing methods other than rules - City and district councils and Bay of Plenty Regional Council.	The purpose of PC4 is to clarify the intent of a rule and propose additional rules for the control of the use of land for the avoidance or mitigation from flood hazards. PC4 is consistent with Policy NH 14C.