

# Proposed Bay of Plenty Regional Policy Statement Section 32 report Natural hazards



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# **Section 32 Report**

## **Natural Hazards**



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# 1 Introduction

This report presents the evaluation of the Natural Hazards topic of the Proposed Regional Policy Statement in accordance with section 32 of the Resource Management Act 1991 (RMA). Section 32 states:

32 *Consideration of alternatives, benefits, and costs*

(1) *In achieving the purpose of this Act, before a proposed plan, proposed policy statement, change, or variation is publicly notified, a national policy statement or New Zealand coastal policy statement is notified under section 48, or a regulation is made, an evaluation must be carried out by —*

...

(c) *the local authority, for a policy statement or a plan (except for plan changes that have been requested and the request accepted under clause 25(2)(b) of Part 2 of Schedule 1); or*

(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.*

....

(4) *For the purposes of the 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.*

(5) *The person required to carry out an evaluation under subsection (1) must prepare a report summarising the evaluation and giving reasons for that evaluation.*

(6) *The report must be available for public inspection at the same time as the document to which the report relates is publicly notified or the regulation is made.*

## 1.1 Structure of this report

Section 2 of this report outlines the identified regionally significant issues and the process of identification.

Section 3 outlines the appropriateness of Objective 23 in accordance with the purpose of the Act.

Section 4 then evaluates the most appropriate policy and method options to achieve the objective. When evaluating the policy and method options, the range of options available is first discussed, and then each option is evaluated. There are four types of options discussed in each instance. These are:

- (a) Broad direction to district and/or regional plans.

This is where a policy directs that a change is to be made to a district and/or regional plan. The method then sets out when this change is to be undertaken.

- (b) Specific direction as to matters to be given effect by regional and/or district plans, to which consent authorities must have regard, and to which territorial authorities must have particular regard when making decisions on notices of requirements.

The policies and methods set out when these matters are to be considered. This may include decisions about preparing, varying, changing, or otherwise altering district and/or regional plans, resource consent decisions, or decisions on notices of requirements.

- (c) Guiding actions

This is where policies and methods outline actions required to help achieve the objective of the Regional Policy Statement. These include:

- Information and guidance
- Integrating management
- Identification or investigation

- (d) Doing nothing

This is where no intervention, either directive or guiding, will occur.

Determining the most appropriate policies and methods is based on an assessment of the *effectiveness* and *efficiency* of the policy and method options, and the risks of acting or not acting when there is uncertain or insufficient information.

*Effectiveness* is a measure of how successful a particular option is in achieving the objective. Effectiveness is a cumulative value, derived from the range of types and scope of influences or impacts of an intervention, towards achieving intended results and environmental outcomes. The effectiveness of an option is not able to be assessed as an absolute value. Rather, options are appraised as to whether they exhibit the qualities that contribute to effectiveness and to what degree, and a determination is made as to the cumulative effect of the pertinent attributes in terms of high, medium or low effectiveness.

When evaluating the *efficiency* of the policy and method options both the benefits (social, economic and environmental) and costs (social, economic and environmental) are discussed. Efficiency of the option is then evaluated as “Yes” (relatively efficient) or “No” (relatively inefficient). *Figure 1* outlines how this assessment was undertaken.

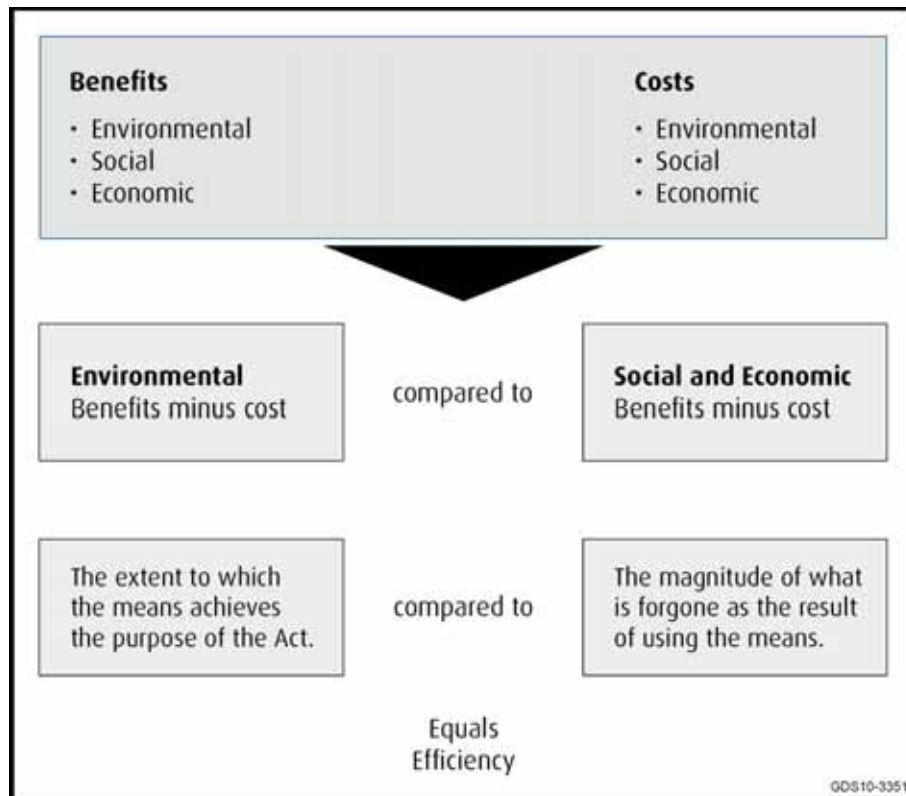


Figure 1 Deriving efficiency from benefits and costs.

The evaluation of 'efficiency' will result in either a positive or negative result in terms of efficiency. Alternatively, if efficiency is expressed as a cost/benefit ratio, it will be either greater than or less than 1. In the event that the ratio is less than 1, the option can be considered efficient, in that the sum of the benefits outweigh the sum of the costs. In the event that the ratio is greater than 1, the option can be considered to be inefficient, in that the sum of the costs outweigh the sum of the benefits. It is important to note that in this evaluation of efficiency, absolute values for each of the variables considered pertinent (i.e. identified as either a cost or a benefit within the evaluation of the options) are not available. Rather, the analysis has endeavoured to present an accurate appraisal of the relative costs and benefits between the options, in order to determine which are efficient and which are not. A simple yes or no is used to differentiate the options as efficient or inefficient.





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## 2 Regionally significant issues

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In identifying the regionally significant issues around natural hazards, the following information was evaluated:

- Criteria to ensure the issues were regionally significant (refer *Appendix 1* for a copy of the criteria)
- Bay Trends (2004) – Report on the state of the Bay of Plenty environment
- Stakeholder written comments/submissions on the Draft Regional Policy Statement
- The Next Bay of Plenty Regional Policy Statement: Issues and Options (2008)
- Monitoring and Evaluation of the Operative Bay of Plenty Regional Policy Statement (2008)
- Bay of Plenty Civil Defence Emergency Management Group Plan 2005 Reviewed April 2008

The resulting issues recommended for inclusion in the Proposed Regional Policy Statement on natural hazards are:

**Issue 1: Potential for natural occurrences to generate severe consequences**

A wide range of natural occurrences in the Bay of Plenty has the potential to generate severe consequences for people and communities.

**Issue 2: Individual choices rarely take natural hazards risks into account**

In making their individual choices about where they live and work, and how they develop the land, people rarely take natural hazard risks into account.

**Issue 3: Existing risks to low frequency high consequence natural hazards**

Existing land uses are at risk from low frequency but high consequence natural hazards.

**Issue 4: People are subject to risk without participating in decisions on its acceptability**

People and communities may have risks imposed on them without having the opportunity to participate in decisions about the acceptability of such risk.

**Issue 5: Co-ordinating agencies' roles to avoid and mitigate natural hazards and manage residual risk**

Integrated management requires many agencies to co-ordinate their roles in avoiding and mitigating natural hazards, and managing any residual risk.



## 3 Extent to which the objectives are the most appropriate

The proposed natural hazards objective is:

Objective 23: Communities achieve acceptable levels of risk from natural hazards.

The following is an outline of the extent to which the objective is the most appropriate to achieve the purpose of the RMA.

The appropriateness of the policies and methods to achieve the objective is evaluated by looking at the effectiveness and the efficiency of the policy and method options and the risks of acting or not acting if there is uncertain or insufficient information.

### 3.1 Objective 23

*Objective 23: Communities achieve acceptable levels of risk from natural hazards.*

- **Achieving the purpose of the RMA:** Objective 23 addresses issues 1–5 and the purpose of the RMA by promoting:

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

and 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. This is also addressed in policies and methods.

Particular matters (within Part 2 of the RMA) of relevance include:

- 6 *...recognise and provide for the following matters of national importance:*
  - (a) *the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development;*
  - (b) *the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development;*
  - (c) *the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna;*
  - (d) *the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers;*
  - (e) *the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga;*
  - (f) *the protection of historic heritage from inappropriate subdivision, use, and development;*
- 7 *... have particular regard to—*
  - (a) *kaitiakitanga;*
  - (aa) *the ethic of stewardship;*
  - (b) *the efficient use and development of natural and physical resource;*
  - (c) *the maintenance and enhancement of amenity values;*
  - (d) *intrinsic values of ecosystems;*
  - (f) *maintenance and enhancement of the quality of the environment;*
  - (g) *any finite characteristics of natural and physical resources;*
  - (h) *the protection of the habitat of trout and salmon;*

(i) *the effects of climate change.*

8 *...take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).*

- **RMA mandate for natural hazards management:**

The relevant subsections of section 30, *Functions of regional councils under this Act*, of the RMA for Objective 23:

(1)(a) *the establishment, implementation and review of objectives, policies, and methods to achieve integrated management of the natural and physical resources of the region;*

(1)(b) *the preparation of the preparation of objectives and policies in relation to any actual or potential effects of the use, development, or protection of land which are of regional significance;*

(1)(c) *the control of the use of land for the purpose of—*

...

(iv) *the avoidance or mitigation of natural hazards:*

...

(1)(gb) *the strategic integration of infrastructure with land use through objectives, policies, and methods:*

A relevant subsection of section 31, *Functions of territorial authorities under this Act*, of the RMA for Objective 23 is:

(1)(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.*

Section 62, *Contents of regional policy statements*, states that:

(1) *A regional policy statement must state—*

(i) *the local authority responsible in the whole or any part of the region for specifying the objectives, policies, and methods for the control of the use of land—*

(i) *to avoid or mitigate natural hazards or any group of hazards;*

- **Integrated management: civil defence emergency management:**

Local authorities also have responsibilities under the Civil Defence Emergency Management Act 2002 to identify and manage hazards through readiness, reduction, response and recovery actions. The purpose of that Act includes encouraging and enabling communities to achieve acceptable levels of risk.

Given the above, Objective 23 is appropriate for achieving the purpose of the RMA.

### 3.2 Analysis of the appropriateness of Objective 23

Final chosen objective	Other alternatives?	Reasons for the alternatives not being the most appropriate to achieve the Resource Management Act
<p>Objective 23: Communities achieve acceptable levels of risk from natural hazards.</p>	<p>Alternative 1: No objective in the Regional Policy Statement. Natural hazards are left to be managed directly by the Resource Management Act, by regional and district plans, and via resource consents.</p> <p>Alternative 2: Retain the existing objective in the Operative Regional Policy Statement which is: <i>The vulnerability to natural hazards of the region's people and communities, and its natural and physical resources, is avoided or mitigated.</i></p>	<p>Alternative 1 does not sufficiently recognise that natural hazards are a regionally significant issue, particularly in the context of the risk associated with low probability but high consequence natural hazards.</p> <p>Alternative 2 incorporates a confusing concept, vulnerability, and otherwise merely restates the words of the RMA.</p>

Given the above, Objective 23 is the most appropriate for achieving the purpose of the Resource Management Act.



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## 4 Evaluation of policies and methods to achieve Objective 23

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The proposed natural hazards objective is:

Objective 23: Communities achieve acceptable levels of risk from natural hazards.

The appropriateness of the policies and methods to achieve the objective is evaluated by looking at the effectiveness and the efficiency of the policy and method options and the risks of acting or not acting if there is uncertain or insufficient information.

### 4.1 Range of policy and method options considered to achieve Objective 23

The focus of this section is to determine whether Objective 23 can be best achieved through broad direction to plans, through specific direction to plans and on matters to which regard is to be had when considering resource consent applications, by providing guidance, or by doing nothing.

This is an assessment of policy options to achieve Objective 23 over and above the alternatives assessed in relation to and presented within the Section 32 reports relating to Matters of National Importance, Iwi Resource Management, Integrated Resource Management, Natural Hazards, and Urban Form and Growth Management. This evaluation should therefore be considered in conjunction with those other Section 32 reports as they contain further information pertinent to addressing the regionally significant resource management issues concerning natural hazards.

#### 4.1.1 Broad direction

##### Option 1: Broad direction to district and/or regional plans

Allow existing regional and district plan provisions to remain unchanged.

#### 4.1.2 Specific direction

##### Option 2: Specific direction to be given effect in regional and district plans and which consent authorities must have regard to

Provide a suite of policies and methods to be given effect in regional and district plans.

#### 4.1.3 Option 3: Guidance

Provide policy tools and allow discretion as to whether they are implemented.

#### 4.1.4 Option 4: Doing nothing

Provide no RMA intervention for the management of natural hazards.



## 4.2 Evaluation as to the effectiveness and efficiency of the policy and method options to achieve Objective 23

Selected option	Analysis of Effectiveness	Effectiveness Rating	BENEFITS (social, economic and environmental)	COSTS (social, economic and environmental)	Efficient?
<b>Direction to district and/or regional plans</b>					
<p><b>Option 1</b> Allow existing regional and district plan provisions to remain unchanged.</p>	<p>Provides certainty as to how the region council will manage natural hazards. Continues an established framework across the region. Allows for innovative approaches. May not adequately address low probability but high consequence natural hazards. May not address all hazards on a risk basis.</p>	Medium	<p><u>Social:</u></p> <ul style="list-style-type: none"> <li>Allows current land use to continue at existing levels, avoiding disruption to established communities, providing certainty.</li> <li>Allows for variation between districts.</li> </ul> <p><u>Economic:</u></p> <ul style="list-style-type: none"> <li>Existing economically productive land use may continue.</li> </ul> <p><u>Environmental:</u></p> <ul style="list-style-type: none"> <li>Allows for environmental mitigation.</li> </ul>	<p><u>Social:</u></p> <ul style="list-style-type: none"> <li>Requires voluntary reduction of risk from some hazards.</li> <li>Does not provide consistency in the way natural hazards are managed.</li> <li>People and communities may be unknowingly at risk.</li> </ul> <p><u>Economic:</u></p> <ul style="list-style-type: none"> <li>Infrastructure may be at risk from low probability but high consequence natural hazards.</li> <li>The cost to people and communities of low probability but high consequence natural hazards may be unacceptable.</li> </ul> <p><u>Environmental:</u></p> <ul style="list-style-type: none"> <li>Demand for hard protection works may threaten natural character, natural features and landscapes, ecological values and cultural sensitivities.</li> </ul>	No
<b>Specific direction to be given effect in regional and district plans and which consent authorities must have regard to</b>					
<p><b>Option 2</b> Provide a suite of policies and methods to be given effect in regional and district plans.</p>	<p>Increases certainty as to how the region will manage natural hazards. Provides a framework for focusing on natural hazard management on a basis of risk. Provides interim direction prior to changes being made to plans. Clearly allocates responsibility for rules about natural hazards.</p>	High	<p><u>Social:</u></p> <ul style="list-style-type: none"> <li>Establishes clear direction for regulatory intervention.</li> <li>Immediate benefit in matters advocated in resource consent processes.</li> </ul>	<p><u>Social:</u></p> <ul style="list-style-type: none"> <li>Some people and communities currently subject to intolerable risk may suffer disruption to their circumstances.</li> </ul>	Yes

Selected option	Analysis of Effectiveness	Effectiveness Rating	BENEFITS (social, economic and environmental)	COSTS (social, economic and environmental)	Efficient?
			<ul style="list-style-type: none"> <li>▪ Provides greater clarity and certainty to the applicant and consent authority about the matters to which regard is to be had when managing natural hazards.</li> <li>▪ Adopts a risk approach that is common to many other aspects of society.</li> </ul> <p><u>Economic:</u></p> <ul style="list-style-type: none"> <li>▪ Leads to increased economic stability because of the uniformly applied risk approach.</li> <li>▪ Reduces risk to acceptable levels in the long term.</li> </ul> <p><u>Environmental:</u></p> <ul style="list-style-type: none"> <li>▪ Promotes soft protection works as preferable.</li> <li>▪ Enhances natural character, natural features and landscapes, and ecological values.</li> </ul>	<p><u>Economic:</u></p> <ul style="list-style-type: none"> <li>▪ Short term adjustment to better-understood risk may be costly to communities and administering agencies.</li> </ul> <p><u>Environmental:</u></p> <ul style="list-style-type: none"> <li>▪ Necessary risk reduction may be at the expense of environmental values in some circumstances..</li> </ul>	
<b>Guidance</b>					
<p><b>Option 3</b> Provide policy tools and allow discretion as to whether they are implemented.</p>	<p>Providing information can guide individuals in their resource management decisions but without addressing societal effects. Provides freedom and ownership to the individual and/or community. Allows for innovative approaches. Provides information to the community.</p>	<p>Medium</p>	<p><u>Social:</u></p> <ul style="list-style-type: none"> <li>▪ Encourages individual responsibility.</li> <li>▪ Provides flexibility and opportunity to develop other risk management initiatives.</li> </ul> <p><u>Economic:</u></p> <ul style="list-style-type: none"> <li>▪ Avoids costs associated with regulatory response.</li> </ul> <p><u>Environmental:</u></p> <ul style="list-style-type: none"> <li>▪ Allows adaptation to changing environmental circumstances.</li> </ul>	<p><u>Social:</u></p> <ul style="list-style-type: none"> <li>▪ Risk of information not being considered.</li> <li>▪ Nobody takes ownership.</li> <li>▪ Defaulting directly to the Resource Management Act instead of having a locally promulgated plan rule framework diminishes respect for local democracy.</li> </ul> <p><u>Economic:</u></p> <ul style="list-style-type: none"> <li>▪ Prospect of risk not being adequately addressed.</li> </ul>	<p>No</p>

Selected option	Analysis of Effectiveness	Effectiveness Rating	BENEFITS (social, economic and environmental)	COSTS (social, economic and environmental)	Efficient?
				<u>Environmental:</u> <ul style="list-style-type: none"> <li>▪ <i>Ad hoc</i> solutions may adversely affect the environment without a corresponding reduction in risk.</li> </ul>	
<b>Doing nothing</b>					
<b>Option 4</b> Provide no RMA intervention for the management of natural hazards.	Uncertainty that responsibility will be taken. Uncertainty that the objective or issues will be addressed. Relies on voluntary initiatives and other interventions to achieve the necessary reductions in natural hazard risk. Allows for innovative approaches. Increased need for “disaster response” solution.	Low	<u>Social:</u> <ul style="list-style-type: none"> <li>▪ Develops an alternative approach.</li> <li>▪ Provides flexibility and opportunity to develop other water management initiatives.</li> </ul> <u>Economic:</u> <ul style="list-style-type: none"> <li>▪ Short term costs avoided.</li> </ul> <u>Environmental</u> <ul style="list-style-type: none"> <li>▪ Allows adaptation to changing environmental circumstances.</li> </ul>	<u>Social:</u> <ul style="list-style-type: none"> <li>▪ Nobody takes responsibility and no action is undertaken.</li> <li>▪ Respect for the law is undermined.</li> </ul> <u>Economic:</u> <ul style="list-style-type: none"> <li>▪ Councils risk being taken to court and being liable for damages for failure to exercise duty of care if no action under the RMA.</li> <li>▪ Costly insurance and disruption.</li> </ul> <u>Environmental:</u> <ul style="list-style-type: none"> <li>▪ Degrades the environment.</li> </ul>	No

### 4.3 Results of evaluation as to the most appropriate policy and method options to achieve Objective 23

Policy and method options	Factors contributing to effectiveness <sup>1</sup>	Efficient?	Selected (most appropriate) option(s)(tick or cross)	Proposed policies and methods
<b>Direction to regional and/or district plans</b>				
<b>Option 1</b> Allow existing regional and district plan provisions to remain unchanged.	Medium	No	X	Policies NH 1B & NH 8D Methods 12, 30
<b>Specific direction to be given effect in regional and district plans and which consent authorities must have regard to</b>				
<b>Option 2</b> Provide a suite of policies and methods to be given effect in regional and district plans.	High	Yes	✓	Policies NH 1B, NH 2B, NH 3B, NH 4B, NH 5B, NH 6B, NH 7C & NH 8D Methods 3, 11, 12, 13, 14, 15, 30
<b>Guidance</b>				
<b>Option 3</b> Provide policy tools and allow discretion as to whether they are implemented.	Medium	No	X	Policies NH 1B & NH 8D Methods 12, 30
<b>Doing nothing</b>				
<b>Option 4</b> Provide no RMA intervention for the management of natural hazards.	Low	No	X	

#### 4.3.1 Discussion on selected options

Having regard to the efficiency and effectiveness of the options, the specifically directive option is appropriate to achieve Objective 23 and therefore deal with the regionally significant issues related to natural hazards.

Option 2 directs changes to plans to require regulatory intervention to avoid intolerable risk and lower tolerable risk to be as low as reasonably practicable. Provided that implementation of this option includes compliance monitoring and enforcement, it will be effective in achieving its targets. While there may be significant transitional costs to some sectors, the overall benefits of largely acceptable risk will flow through into cultural and economic benefits and the health and safety of people and communities.

#### 4.3.2 Options not selected

Option 1 provides broad direction largely by allowing existing regional and district plan provisions to continue. The main cost implication is that people and communities may be unknowingly at risk from low probability but high consequence natural hazards.

Option 3 is unlikely to be effective. The costs to individuals in voluntarily acting without the confidence that in aggregate the action will be effective is likely to result in little or no action being taken.

<sup>1</sup> Effectiveness becomes the net value of an assessment of the relative difference between options in terms of their ability to influence or deliver intended outcomes, i.e. whether they have great or widespread effect versus being of marginal or limited effect.

Option 4 is assessed as both ineffective and inefficient. Doing nothing is likely to result in people and communities being at unnecessary risk from natural hazards and economic loss.

## **4.4 Risks of acting or not acting if information is uncertain or insufficient**

Information about most natural hazards is both uncertain and insufficient. Probability is used to assist in dealing with uncertainty. Although it is not known when an event may occur, based on past events a judgement can be made about the likelihood of events of various magnitudes. Together with assessment of the consequences of such events, risk can be estimated and managed accordingly.

### **4.4.1 Risks of acting**

When a risk assessment is based on data that is later found to be mistaken, a risk may be taken or avoided when, in hindsight, a different decision would have been made. The risk of acting in this situation is that, in time, better data may show that the action taken has been incorrect. This could result in lost opportunity to gain a social, economic or environmental benefit. Regularly reviewing the data on which risk assessment is based, revising them as necessary, provides a sufficiently responsive policy framework to justify proceeding.

### **4.4.2 Risks of not acting**

If no action is taken until sufficient information is available to remove uncertainty, intolerable risk may be taken by decision makers, by proxy on behalf of their constituents. If a natural hazard event causes a community to be devastated in circumstances that could have been avoided with sound planning, lives could be lost, confidence will suffer and investment opportunities foregone.

Overall, the risks of not acting outweigh the risks of acting and the action set out in Option 2 above is adopted.

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## Appendix 1 – Criteria used to determine regionally significant issues

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The criteria used for determining whether an issue was a resource management issue of regional significance were:

- The issue was a natural or physical resource management problem.
- The issue was to be of regional significance (see further criteria below).
- The issue was about achieving the purpose of the RMA.
- The issue did not “repeat” the RMA, the New Zealand Coastal Policy Statement, any other national policy, or another issue in the RPS.
- The issue was explained in the context of the Bay of Plenty region.

Regional significance was determined using the following criteria:

- The issue concerns a resource which is regionally significant, and the issue requires integrated management at a regional level ; and
- There is a potential shortage of the resource and resultant allocation issues; or
- There is a significant level of conflict over the resource which is either occurring or is foreseeable over the next 10 years; or
- The resource is potentially subject to significant adverse effects at a regional level; or
- There are significant issues in terms of Part 2 of the RMA which are or are likely to arise at a regional scale (e.g. maintenance and enhancement of access along waterways); or
- The community has signalled that it regards a particular issue as being of regional significance; or
- The issue is one of national significance (e.g. preservation of natural character) and requires regional intervention; or
- The issue is one of District significance but requires regional intervention; or
- The matter is one which a National Policy Statement or National Water Conservation Order requires to be addressed.



## Appendix 2 – References

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Bay of Plenty Civil Defence Emergency Management Group (2008) Bay of Plenty Civil Defence Emergency Management Group Plan 2005 Reviewed April 2008.

Environment Bay of Plenty (2004) Bay Trends – Report on the state of the Bay of Plenty environment.

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