

REVIEW
OF THE
NEW ZEALAND COASTAL POLICY STATEMENT 1994 –
COASTAL HAZARDS

A review of the effectiveness of the NZCPS in promoting sustainable coastal hazard management in New Zealand

Volume 1 – Report

Report prepared for:
The Minister of Conservation

Report prepared by:
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Volume 1 - Report

**A report prepared for the Minister of Conservation
February 2004**

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Executive Summary

Introduction

The New Zealand Coastal Policy Statement (NZCPS) is the only national policy statement that is mandatory under the Resource Management Act 1991. The first NZCPS was gazetted in May 1994, and includes a policy requiring that it be reviewed within nine years by persons independent of the Minister of Conservation.

As part of the independent review of the NZCPS undertaken in 2003 by Dr Jo Rosier, this review by Mike Jacobson was commissioned to focus on the particular role of the NZCPS in promoting sustainable management of natural hazards in the coastal environment.

The purpose of the review is to report on the effectiveness of the NZCPS to the Minister of Conservation, who is then to consider the desirability of reviewing, changing or revoking the NZCPS.

The review methodology

Both consultation and case study analysis were used in this review to:

- assess the effectiveness of the coastal hazard policies to date;
- assess the issues affecting the performance of the NZCPS coastal hazard policies; and
- propose some changes and additions to the coastal hazard policies that may improve effectiveness.

The intent was to enable the reviewer to arrive at a recommendation to the Minister of Conservation as to whether the Minister should convene a Board of Inquiry to formally review the NZCPS.

Factors affecting the promotion and implementation of sustainable coastal hazard management that lie outside the scope of NZCPS policy influence were also acknowledged, and some possible responses briefly addressed.

The case studies used include regional policy statements, regional coastal environment plans, regional coastal plans, district plans, draft coastal hazard plan provisions, non-statutory strategies, and resource consents from three case study regions (Auckland, Bay of Plenty and greater Wellington) as well as Wainui Beach in Gisborne.

Views expressed to this reviewer by local government planning staff, and in oral and written submissions to Dr Rosier, were considered alongside the case study analysis in order to gain insights into the effectiveness of the NZCPS coastal hazard policies and the issues affecting NZCPS performance.

The review conclusions

In terms of the outcomes expected of a national policy statement, the coastal hazard policies up to the present time have ranged from effective to ineffective, with performance against many outcomes gauged as only modestly effective or worse.

Effectiveness was *greatest* in relation to influence on regional plans, on coastal hazard planning specialists, and on larger greenfield development consents, and *poorest* in relation to influence on the district plans of less well resourced councils, on the perceptions of property owners and development professionals, and on the management of coastal hazard areas where there is existing development.

It was notable that nine years after the NZCPS was gazetted, district plans, in particular, were far from settled, and councils were still undertaking work that will likely see greater consistency with the NZCPS coastal hazard policies in the near future. The NZCPS coastal hazard policies have yet to achieve their full effect.

Despite the evolution of district plans towards greater consistency with the NZCPS coastal hazard policies, there remains a concern about the large number of coastal hazard management issues identified in this review, many of which represent substantial barriers to effective implementation of sustainable coastal hazard management in New Zealand, both now and coming into the future.

The review found that many of the issues and barriers are beyond the scope of the NZCPS to remedy by itself. Improving NZCPS effectiveness, particularly in relation to implementation on the ground, will be difficult unless some of the barriers are addressed by means other than changes to NZCPS policies.

However, the review also identified a number of ways in which the NZCPS coastal hazard policies could be changed and supplemented to increase the effectiveness of the NZCPS in contributing, over time, towards more sustainable coastal hazard management in New Zealand.

Many council staff, many submitters, and the reviewer, consider that the NZCPS does have a valuable role to play in promoting sustainable coastal hazard management, and that changes and additions to the NZCPS coastal hazard policies would increase the relevance and effectiveness of the NZCPS. In particular, the required changes are for the NZCPS to:

- articulate a vision of reduced risk to property assets, and of greater protection for coastal habitats, ecosystems and natural features (with their associated values including public access, amenity values and recreation), from the adverse effects of property protection works such as seawalls; and
- include more specific policies that address the particular challenges of sustainable coastal hazard management including:
 - the relationship between coastal hazards and the natural dynamic coastal processes that create and maintain coastline assets such as beaches;
 - the difficulties of managing property development in coastal hazard zones over the longer term;
 - the effects of property protection works on public coastline assets; and
 - the effects of climate change.

The review recommendation

The reviewer recommends that the Minister of Conservation invoke the Resource Management Act review provisions so as to enable a Board of Inquiry to consider changes and additions to the NZCPS to achieve more effective promotion of sustainable coastal hazard management in New Zealand. Some policy changes are suggested for consideration.

1. Introduction

1.1 Purpose

This report focuses on the role of the New Zealand Coastal Policy Statement 1994 in the management of natural hazards in the coastal environment. It has been commissioned by the Department of Conservation as part of the Minister of Conservation's Independent Review of the New Zealand Coastal Policy Statement 1994 (NZCPS) by Dr Jo Rosier of Massey University.

The purpose of this report is:

- to review the effectiveness of NZCPS natural hazard policies
- to identify issues affecting NZCPS effectiveness, and consider ways to increase NZCPS effectiveness;
- to recommend whether the NZCPS natural hazard policies should be changed; and
- to propose changes and additions to policies for consideration during any review by a Board of Inquiry.

The report reviews those parts of the New Zealand Coastal Policy Statement 1994 that relate to natural hazards and their management, primarily NZCPS Section 3.4: Recognition of Natural Hazards and Provision for Avoiding or Mitigating their Effects.

The report will serve as a resource document for Dr Rosier's review of the full NZCPS. Should the Minister decide to review the present NZCPS, the document will also be available to assist the Department of Conservation, the Board of Inquiry and those who wish to make submissions on changes to the NZCPS.

1.2 Background

1.2.1 NZCPS Review Process:

As noted above, this report forms part of the Independent Review of the New Zealand Coastal Policy Statement 1994 (NZCPS).

The review is required by Policy 7.1.1 of the NZCPS:

The effectiveness of the New Zealand Coastal Policy Statement will be reviewed by a person or persons independent of the Minister of Conservation no later than 9 years after its gazettal, and the Minister shall then consider the desirability of reviewing, changing or revoking the Statement.

The Resource Management Act 1991 (RMA) Section 56 sets out the purpose of New Zealand coastal policy statements:

The purpose of a New Zealand coastal policy statement is to state policies in order to achieve the purpose of this Act in relation to the coastal environment of New Zealand.

As the purpose of the RMA is “to promote the sustainable management of natural and physical resources” (Section 5(1)), the purpose of the coastal hazard related NZCPS policies can be paraphrased as ‘to promote sustainable coastal hazard management in New Zealand’.

For brevity, ‘natural hazards in the coastal environment’ are referred to as ‘coastal hazards’ in this report.

The NZCPS specifically addresses coastal hazards in Section 3.4: Recognition of Natural Hazards and Provision for Avoiding or Mitigating Their Effects. Policies 3.4.1 to 3.4.6 cover the issues of:

- identifying coastal hazard areas;
- recognising the possibility of sea level rise;
- the role of natural features such as sand dunes in protecting development
- the migration inland of natural features;
- locating and designing new development so that protection works are avoided;
- permitting protection works when existing development is threatened only where they are the best practicable option; and
- locating and designing protection works to avoid adverse effects to the extent practicable.

Other NZCPS policies that relate to avoiding adverse effects, and to the effects of activities in response to coastal hazards, are pertinent to sustainable coastal hazard management. These include policies that address:

- potential effects of development on natural character and cumulative effects (Policy 1.1.1);
- protecting unique coastal ecosystems (Policy 1.1.2);
- protecting important elements of natural character (Policy 1.1.3);
- protecting the integrity, functioning, and resilience of the coastal environment in terms of the dynamic processes and features arising from the natural movement of sediments, water and air (Policy 1.1.4);
- what form of development would be appropriate, and where it would be appropriate (Policy 3.2.1);
- the hierarchy of avoidance of adverse effects in preference to mitigating or remedying effects (Policy 3.2.2);
- adopting a precautionary approach (Policy 3.3.1); and
- sharing information and knowledge, particularly where it relates to coastal processes (Policy 3.3.2).

The coastal hazard policies, set out in Section 3.4 of the NZCPS are directed at the consideration of consents as well as at the preparation of local authority policy statements and plans. As the only national policy statement yet prepared under the Resource Management Act (RMA), the NZCPS coastal hazard policies should have an important influence on all subordinate RMA planning instruments and coastal resource consents where coastal hazards are a concern. In the recent 2003 amendments to the RMA, there is a requirement for local authorities to “give effect” to national policy statements.

As a statement of national policy and of matters of national importance for the coastal environment, the NZCPS should also inform and guide planning and decision-making under

other Acts (eg. the Reserves Act 1977) and the preparation of non-statutory strategies and other initiatives to improve coastal hazard management.

1.2.2 Coastal Hazards in New Zealand:

Coastal hazards in New Zealand include coastal erosion, inundation by the sea, coastal cliff instability, and tsunamis. (Hazards to health and safety during recreation, such as from rip currents, bars and poor water quality are not considered in this report.)

The built assets at risk include public infrastructure such as roads and recreational facilities, as well as private residential and commercial property.

In addition, natural features and ecosystems such as beaches and estuaries that would generally migrate or re-appear in different places on a natural coastline unconstrained by development, are also public assets at risk on a coastline where such dynamic behaviour is constrained by development and by works to protect that development.

Larger, well armoured port facilities are less susceptible to coastal hazards (although they can sometimes exacerbate hazards along the adjacent coastline).

While there is little or no expansion of public infrastructure in coastal hazard prone areas, the same is not true for the spread and intensification of private residential development. It is private residential development that represents the greatest challenge to communities and planners alike.

This report comes at a time when the demand for coastal property for residential development, and the value of coastal property, has trended steeply upwards. This is a world wide trend.

In particular demand are residential properties ‘on the beach’ or ‘at the water’s edge’. While these terms are not literally true, many of these properties, and others behind them, are contained within areas that are subject to coastal hazards.

Some properties could well be inundated or could collapse on to the beach during the next major storm (or they could be unaffected for 100 years). Other properties may not face the same likelihood of a hazard event for 50 or 100 years until ongoing erosion, sea level rise, or other coastal process means the immediate risk zone has moved inland to embrace them. Even where there is no recognition of coastal hazards, any property near the sea could be severely threatened or damaged at any time by an extreme storm or a large tsunami.

While it is hard for coastal residents or prospective purchasers to visualise on a balmy summer’s day, especially when the waves are lapping gently a wide beach, coastal hazard events do happen, and are likely to happen more frequently in future because of sea level rise and changed weather patterns that are the result of predicted climate change.

1.2.3 Coastal Hazards and Planning:

Sustainable management of coastal hazard prone land involves long-term planning and responses. The planning and responses need to consider both the threat from the coastal hazards to property assets, and the threat from coastal hazard responses to public beaches and other coastline assets that are culturally significant to all New Zealanders.

The current planning regime applying to coastal hazards has developed as follows. In the post World War II years, many of the small eclectic collections of low value beaches around the New Zealand coast began evolving into densely subdivided residential settlements and more new coastal subdivisions were proposed. By the late 1960s and early 1970s some subdivisions were being challenged on the grounds of coastal hazard concerns (Gibb 1998). With a body of such precedents built up, by the late 1970s and early 1980s the concept of coastal hazard management began to gain acceptance, and different approaches to coastal hazard management were developed (ARC Coastal Hazard Strategy 2000).

The new coastal hazard management approaches and new research into the coastal hazards affecting beaches and communities began to influence District Schemes and Planning Tribunal cases under the Town and Country Planning Act 1977 in the 1980s. In the 1990s came the development of the coastal management regime in the Resource Management Act 1991 (RMA) and the preparation of the New Zealand Coastal Policy Statement as the only national policy that is mandatory under that Act.

The NZCPS was gazetted in May 1994, and the parts of it that deal with coastal hazard management are the latest national statutory recognition of the need to plan ahead to avoid or reduce the effects of coastal hazards on landowners, communities, and the coastal environment.

1.2.4 Cultural Significance of Coastal Areas:

Coastal hazard management needs to take into account the cultural significance of the areas potentially affected by that management. That significance has been emphasised in the public debate about the foreshore and seabed that began in 2003.

Expressions of the importance of the coastline and beaches to New Zealanders were forthcoming during that debate from communities and business people (often in the tourist industry), and ranged from “the favourite outdoor setting for New Zealanders” to “the quintessence of the Kiwi lifestyle”.

That foreshore and seabed litigation and debate arose because of the economic, cultural and spiritual importance of the New Zealand coastline to Maori, and of their desire to influence its management and utilisation. A number of Waitangi Tribunal reports over the years have also documented the concerns of Maori over coastal management.

1.3 The particular challenges for coastal hazard management

An analysis of the particular challenges for coastal hazard management policy, summarised here and detailed in Appendix 3, provides a context and conceptual framework for this review.

The NZCPS coastal hazard policies reflect the development of the discipline of coastal hazard management in New Zealand by the early 1990s, under the new statutory goal of sustainable management. Managing coastal hazards has some fundamental differences to other related management tasks in the coastal environment. These distinguishing features are that management of coastal hazards and coastal hazard responses involves two particular dilemmas for communities, planners and decision-makers, as well as a special new factor that compounds those dilemmas.

An understanding of these distinct features is necessary to make sense of the analysis in this report, and to understand the difficulties and subtleties facing those who are preparing plan provisions and strategies that seek to give effect to the NZCPS coastal hazard policies and promote sustainable coastal hazard management.

1.3.1 Coastal hazard or natural coastal process?

The first dilemma is that coastal erosion, cliff collapse and inundation by the sea are both coastal hazards and natural coastal processes; and that sustainable coastal hazard management seeks both to protect the community from coastal hazards, and to protect the integrity and functioning of natural coastal processes.

That dilemma is resolved by an understanding that natural coastal processes are only coastal hazards when development is in their way, and by adopting an integrated approach to coastal hazard management involving a hierarchy of responses. That hierarchy is categorised in the Appendix 3 discussion as *avoidance*, *active management of coastal resources*, and *protection* ('soft' protection then 'hard' protection).

1.3.2 Do seawalls stop or increase erosion?

The second dilemma arises from a common instinctive response to coastal erosion, which is to immediately stop the erosion with hard engineering works such as seawalls.

However, seawalls (for as long as they are not washed away) can both stop and increase erosion. They can:

- stop erosion of land and property behind the seawall; and
- increase erosion of the beach and foreshore in front of the wall, at each end of the wall and, along the coast 'downstream' from the wall.

Where the erosion is part of a long-term trend of erosion (ie the coastline is retreating over time), there is a particular problem as follows: (Komar 1996; Patterson 1996)

On a retreating coastline without a seawall, the natural features of foreshore, beach, dune, inter-dune wetlands, estuaries, etc will migrate landward to take up a new position as sediment is interchanged between these features by waves and wind. This is part of the phenomenon of ‘dynamic natural coastal processes’ or a ‘dynamic coastline’.

On a retreating coastline with a seawall, the natural features of foreshore, beach, dune, inter-dune wetlands, estuaries, etc cannot migrate landward. As each feature reaches the wall, it will progressively disappear. This is known as ‘coastal squeeze’ (Bijlsma et al 1996; IPCC 2001).

Dahm (2004) points out that ‘coastal squeeze’ also occurs on beaches in dynamic equilibrium where the seawall has been placed too far seaward, near the seaward edge of the dynamic shoreline envelope, where it interferes with the active beach for a high proportion of the time.

1.3.3 The compounding effect of climate change

The special new factor that compounds the above dilemmas is the phenomenon of human induced climate change and its effects on coastal hazards. Those effects include sea level rise and changes in the severity or frequency of storms (IPCC 2001; Climate Change Office, MfE 2003 draft).

Many coastlines that are currently in a state of dynamic equilibrium will switch to a state of retreat (a trend of long-term erosion).

As discussed above, a long-term erosion trend and a consequent demand for seawalls along more of New Zealand’s coastline will result in more hard engineering structures and more ‘coastal squeeze’, and hence a greater degradation of coastline values along more of the coastline.

Increased coastal hazards will also increase the costs to those communities that are attempting to maintain hard property protection works such as seawalls.

Some additional issues, addressed in detail in Appendix 3, include:

- public good vs private good;
- short-term cost vs long-term benefit; and
- the analysis and perceptions of hazard, vulnerability and risk.

In summary, there is a significant difference between managing coastal hazard responses and managing other activities in the coastal environment. The dilemmas and pressures that are inherent in coastal hazard management mean it is a discipline that requires very clear and specific policies if confusion is to be avoided and effective implementation promoted.

1.4 Related reviews and reports

Other than the companion report of the review of the full NZCPS (Rosier 2004), there are a number of recent or concurrent reviews and reports of direct relevance to this review of coastal hazard management under the NZCPS.

A concurrent project is the development of an Oceans Policy, which is wide-ranging in relation to marine and coastal management, and may well affect the role of the NZCPS in promoting sustainable coastal hazard management.

Also, coastal hazards can physically affect the quantity and quality of public access, particularly where there is coastal retreat (including from sea level rise), and the consequent armouring of the shoreline creates ‘coastal squeeze’ – which can lead to the loss of beaches and other natural features. There is therefore a connection between this review and other reviews concerning climate change and public access:

- reports being prepared for the New Zealand Climate Change Programme include three reports (listed below) which represent part of the work of the Climate Change Office at the Ministry for the Environment to develop guidance notes to assist local government adapt to the effects of climate change;
- the ongoing foreshore and seabed public debate, following the Appeal Court decision to allow the Maori Land Court to hear cases seeking customary title, has ‘spilled over’ to cover land issues, following concerns over public access to, and use of, beaches and the ‘Queen’s Chain’¹ generally; and
- a reference group under the auspices of the Ministry of Agriculture (MAF), the Land Access Ministerial Reference Group, was set up in January 2003 by the Government to report on public access in New Zealand, including to and along the sea – the reference group report was released in August 2003 and, at the time of writing, consultation meetings around the country to get feedback on the report were just completed.

The following reports are briefly reviewed in Appendix 2:

- *Independent Review of the New Zealand Coastal Policy Statement 1994*, Jo Rosier, 2004, Massey University.
- *Monitoring the Effectiveness of the New Zealand Coastal Policy Statement: Views of Local Government Staff*, unpublished report prepared for the reviewers of the NZCPS, Department of Conservation, 2002
- *Coastal Hazards and Climate Change – A Guidance Note for Local Government in New Zealand*, August 2003, Draft, Ministry for the Environment
- *Local Government Climate Change Adaptation Project – Environment Bay of Plenty Coastal Hazards Case Study – Issues, Barriers and Solutions*, Sarah Chapman, Lawrence Cross and Chapman Consultants, May 2003.
- *Overview of Climate Change Effects and Impacts Assessment Guidance Note*, Ministry for the Environment, 2003
- *Walking Access in the New Zealand Outdoors*, Ministry of Agriculture and Forestry, 2003
- *Coastal Hazard Strategy & Coastal Erosion Management Manual*, Auckland Regional Council Technical Publication No. 130, July 2000.

¹ The latest comprehensive discussion of the concept and reality of the ‘Queen’s Chain’ is contained in *The Law on Public Access along Water Margins* Hayes 2003, which is a companion volume to the MAF report *Walking Access in the New Zealand Outdoors* cited here.

1.5 Terminology

Coastal hazard management practitioners use many technical terms to describe coastal processes, hazard zones, development setbacks, hazard management approaches, and types of hazard response.

A glossary of terms used in this review and in the documents reviewed is included at the back of this volume of this report.

2. Methodology

2.1 An outline

This review follows the case study approach adopted by Dr Jo Rosier for the independent review of the effectiveness of the NZCPS (Rosier 2004), with adaptations made to suit the particular character of coastal hazard management (as detailed in Appendix 5).

The methodology was as shown in Figure 1. Peer reviews provided an independent critique of both the methodology and the findings of the review (and source material is available from the Department of Conservation to facilitate other independent evaluation). The report structure follows the steps listed here:

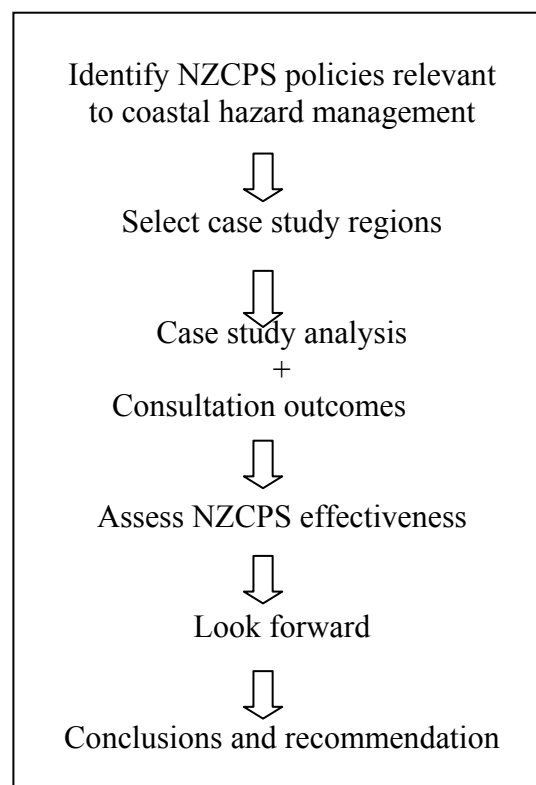


Figure 1: Methodology of the review

1. *Identification of relevant NZCPS policies*

The policies relevant to a review of coastal hazards are primarily contained in Chapter 3 of the NZCPS, with several Chapter 1 policies also of relevance to coastal hazard responses. (These policies are summarised in Chapter 1.2 above, and are set out for easy reference on fold out sheets at the back of this volume.) These relevant policies are referred to as the “coastal hazard related NZCPS policies”.

2. *Selection of case study regions*

Representative regions of New Zealand (in relation to the nature of both the coastal hazards and the assets affected) were selected, with a preference for the regions covered by Dr Rosier in her main review.

3a. *Case study analysis*

The cascade of RMA policy statements, plans, consents and non-statutory strategies in the case study regions were then examined for consistency with the coastal hazard related NZCPS policies and to determine the effectiveness of the NZCPS in this regard. The tables produced for each region provide an assessment of consistency on a policy-by-policy basis, while the narrative for each region focuses on the effectiveness of the NZCPS in influencing the plans and decisions in the light of the overall approach and circumstances in each region and district. The consent case studies chosen were those where issues covered by the NZCPS coastal hazard policies needed to be addressed.

(A more detailed identification of relevant provisions and parts of decisions is contained in Appendices 6–13 .)

3b. *Consultation outcomes*

The case study analysis was undertaken in the light of, and alongside, a consideration of the views of those consulted as part of the NZCPS review. That consultation included workshops with local government staff (Young 2002) and the views of local government staff gathered during discussions of their plan provisions and consent processes. Also considered were the views of landowners, developers and other individuals and groups, gathered from the written submissions to Dr Rosier, the general consultation by Dr Rosier, and the views and positions recorded in the documents reviewed by this reviewer.

4. *Assessment of NZCPS effectiveness to date*

The analysis led to insights into the role and effectiveness of the coastal hazard related NZCPS policies up to the present in promoting sustainable coastal hazard management.

5. *Looking forward*

These insights led in turn to consideration of the issues affecting NZCPS performance and ways effectiveness could be increased in the future. The issues affecting NZCPS performance include matters of policy and also other matters outside the scope of NZCPS policies.

6. *Conclusion and Recommendation*

A conclusion was reached on the need for changes and additions to NZCPS policies in order to make the NZCPS relevant and effective in promoting sustainable coastal hazard management into the future. It was considered appropriate and constructive to also:

- include a range of matters that could be addressed in coastal hazard related NZCPS policies to increase the effectiveness of the NZCPS; and
- include a brief list of other initiatives identified during the review that could contribute to increased NZCPS effectiveness.

Suggestions for changes and additions to coastal hazard related NZCPS policies are also set out in the form of draft policies, purely for reasons of conciseness and as a basis for discussion.

7. *Peer review*

The methodology and the findings of the report were then subjected to peer review. As discussed in Appendix 5, issues were identified in the two peer reviews, some of which have been addressed in a reworking of this report and some of which are beyond the resources and time available for this review, but which point to further work that could be undertaken by other researchers.

It is important to record that the peer reviews, in essence, provided support for both the methodology and the findings of this review, but provided different perspectives and brought different experiences to discussion of the scope and detail of changes that may be appropriate to the NZCPS to promote sustainable coastal hazard management.

8. *Availability of source material*

As this review could be a precursor to a formal and widely consultative review of the NZCPS by the Department of Conservation and a Board of Inquiry, all source documents held by the reviewer have been provided to the Department of Conservation to be held on files readily available to any person interested in accessing the documents.

2.2 Discussion of methodology

A detailed discussion of the methodology of this review is contained in Appendix 5 – the following summarises the key points.

Case study methodologies generally enable a more in-depth and targeted study of the processes that produce plan provisions and decisions than can be achieved by more generalised approaches such as randomly distributed questionnaire surveys, or keyword searches in a random sample of the many policy statements, plans and consents with relevant content.

The adoption of the case study approach, as initially determined by Dr Rosier for the full NZCPS review, was considered particularly appropriate for this coastal hazard policy review. Both the reviewer's experience and the preliminary consultations with council staff (Young 2002), indicated that in New Zealand:

- a more in-depth examination (beyond the provisions in planning instruments) was required to begin to understand the effect of the coastal hazard related NZCPS policies and the ways in which those policies could be changed to better promote sustainable coastal hazard management;
- there are many common themes in the issues facing coastal communities in all districts and regions threatened by coastal hazards, and case studies facilitate an in-depth approach to exploring those themes that would not be achieved by an attempt to examine all or many districts and regions; and

- there are many common themes in the barriers to achieving a sustainable response to coastal hazards, which again would benefit from a more in-depth case study approach.

Peer review provided an important check on the appropriateness of the methodology, the representativeness of the case studies chosen, and the balance of the findings.

The reviewer would like to acknowledge the very important contribution of local government staff to this review of coastal hazard policies.

2.3 About the reviewer

Michael Jacobson BSc BE Honours (Water & Soil) has worked for the Ministry of Works and Development (Water & Soil Division, Technical Investigations, and assistant site engineer for Hutt River Road bank protection works), for the Department of Conservation (coastal consents and policy analyst), and for the Kapiti Coast District Council (senior resource consents officer), before becoming an independent resource management consultant.

While in head office of the Department of Conservation, the reviewer's work was primarily focused on coastal consent processes and practice guidelines for Department of Conservation staff. The reviewer was also part of the Coastal Section team that guided the transition of coastal management from the Harbours Act 1950 and Town and Country Planning Act 1977 to the Resource Management Act 1991, including the assessment of the first generation of draft and proposed regional coastal plans. The reviewer also provided technical assistance to the team tasked with preparing the draft NZCPS. In addition to the evidence of Dr Gibb, the reviewer provided the primary technical input from the Department of Conservation into the Wainui Beach seawall litigation and resolution process from 1992 to 1998.

While working for the Kapiti Coast District Council, the reviewer was involved in pre-application advice to developers and property owners on the coastal hazard provisions in the District Plan and regional documents and the NZCPS. The reviewer also was the reporting officer (or had a substantive role) in many applications for subdivision or development or protection of coastal hazard prone land. Those applications include most of the Kapiti Coast case study consents reviewed in this report.

The reviewer has been a member of the New Zealand Coastal Society since its inception, and has taken a special interest in the effects of seawalls on beaches and the translation of such technical knowledge into coastal management practice (Jacobson 1991, 1996, 1997 and 2001).

3. Case Studies: RMA Policies, Plans and Consent Processes

3.1 Bay of Plenty region – regional policy statement, regional and district plans and consents

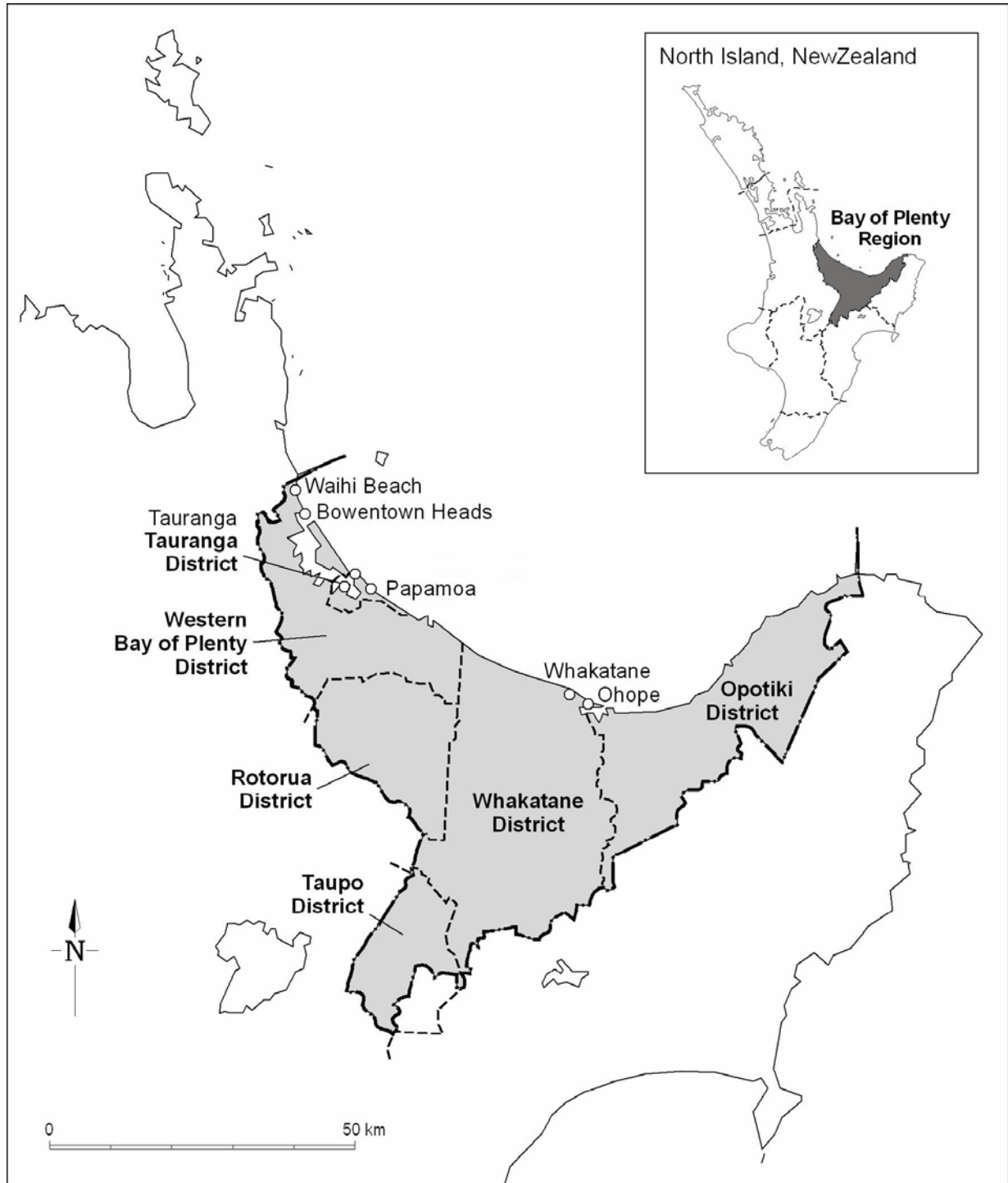


Figure 2: Location map for districts and sites in the Bay of Plenty region

3.1.1 Setting the scene

The Bay of Plenty is a region with considerable coastal attractions, both for visitors and residents. Like many such populous coastal regions in New Zealand, it has seen recent and ongoing large scale residential development focused on the coastline, and like many coastal regions, much of the open coastline is subject to coastal hazards.

Tauranga Harbour contains one of the largest ports in New Zealand, with the location and nature of port development making the port less susceptible to adverse effects from coastal hazards.

The open coast is subject to hazard from both coastal erosion and coastal flooding (including tsunami), although hazard problems are also experienced to a lesser extent in Tauranga Harbour and some of the other estuaries (eg Maketu).

The case study policy and plans for this region are the Environment Bay of Plenty's Regional Policy Statement and Regional Coastal Environment Plan, the Tauranga District Plan, the Western Bay of Plenty District Plan, and the Whakatane District Plan. Proposed variations to the Tauranga District Plan are reviewed in Section 4.

Four consents from Western Bay of Plenty were selected as the consent process case studies for the Bay of Plenty region, following an examination of the consent files made available by the three district councils and consultation with Environment Bay of Plenty. The reasons the consent case studies for this region are limited to this one district are outlined below.

No consent processes comparable to the Waihi Beach seawalls or the multiple dwelling consent at Pukehina Beach (see 3.1.3) were found for Tauranga, while the approach to infill subdivision and single dwelling re-development in coastal hazard zones in Tauranga district was found to be very similar to the approach revealed in the case studies of a Waihi Beach infill subdivision and a single dwelling replacement at Pukehina Beach.

The undeveloped state of the Whakatane District Plan and the limited consent file documentation provided by that council precluded useful consent case studies from the Whakatane District. It can be noted, however, that the consent decisions that were provided for several Ohope Beach subdivisions and developments appeared to reflect the very limited coastal hazard policy development in the Whakatane District Plan.

3.1.2 Assessment of the policy statement and plans in the Bay of Plenty region

This section and Tables 3.1.1–3.1.5 summarise the effectiveness of the coastal hazard related NZCPS policies in influencing the provisions in regional and district plans in the Bay of Plenty region.

See Section 4 for a review of proposed variations to the Tauranga District Plan and a review of early suggestions for changes to the Whakatane District Plan. Refer to Appendix 6 for a more detailed assessment of the consistency of the plans with the coastal hazard related NZCPS policies.

Bay of Plenty Regional Policy Statement

The Bay of Plenty Regional Policy Statement became operative in December 1999.

The policy statement draws attention to the important role of the Bay of Plenty Regional Coastal Environment Plan and provides a general overview of the matters covered in the Regional Coastal Environment Plan.

Notably, however, NZCPS Policy 3.4.4 (that natural features may migrate inland) is cited in the policy statement, but is not carried over into the Regional Coastal Environment Plan so that it can be elaborated for this region.

The concept of risk is introduced as a combination of the probability of the natural hazard and the vulnerability of human infrastructure, and a policy is to reduce net vulnerability of existing communities over time. There is concern expressed in the policy statement that hazard mitigation works can lead to increased development and hence increased vulnerability.

There is considerable emphasis on the need to increase community awareness and understanding of the significance of natural hazards as a way of better achieving the avoidance and mitigation of natural hazards.

The regional issues also include that: “The avoidance and mitigation of natural hazards through appropriate land use planning is very limited.”

There is an emphasis on the right of every citizen to have the best possible hazard information, and on the need for cooperation between the regional council and district councils in order to achieve the integrated management of natural hazards.

Bay of Plenty Regional Coastal Environment Plan

This Regional Coastal Environment Plan (RCEP) is the regional instrument that specifically addresses coastal hazards.

A Proposed Regional Coastal Environment Plan was notified in June 1999. Most of this regional plan became operative in July 2003. The natural hazards chapter reviewed here was still in the ‘proposed’ stage, and the reviewer has not examined the final wording as approved by the Minister of Conservation in December 2003.

With the exception of NZCPS Policy 3.4.4 (in relation to future development, recognition that natural features may migrate inland) this regional plan shows a high penetration by, and acceptance of, the coastal hazard related NZCPS policies.

The explanations and provisions of the plan both explain and develop the NZCPS coastal hazard policies.

This plan goes beyond the NZCPS coastal hazard policies in:

- encouraging an integrated approach where coastal hazards are just one of a number of factors in determining the width of development setbacks;

- articulating an outcome vision in the Objective: “No increase in the total risk from hazards”.²

Tauranga District Plan

The Proposed Tauranga District Plan was notified in 1998. The ‘Hazards’ chapter of the Tauranga District Plan has not yet become operative. This is due to a reference to the Environment Court by landowners challenging the extent of hazard zones along the Papamoa coastline.³

In an interim decision on that *Skinner* case, the Environment Court largely confirmed the District Council hazard lines, with the exception that the proposed safety buffer zone was to be deleted. An appeal to the High Court by the resident group was dismissed⁴, and an appeal by the Council over the safety buffer zone deletion has since been dropped by Council. Coastal hazard provisions to give effect to the Environment Court interim decision are still being prepared by the District Council for forwarding to the parties and the Court, so that a final decision can be made and the coastal hazard provisions can become operative. (Those draft variations are broad in scope, and are reviewed in Section 4 below.)

The coastal hazard related NZCPS policies have been partially effective in influencing the proposed provisions of the Tauranga District Plan. The Plan emphasis in the ‘Hazards’ section is on identifying hazard areas with graduated zones, protecting natural defences, and avoiding situations in which property is at risk (NZCPS policies 3.4.1, 3.4.2, 3.4.3, and 3.4.5).

The introduction and explanation of policies is fairly brief, and there is little specific guidance on how the hazard objective is to be achieved.

There are policies that represent forward planning to enable the Council to give effect to NZCPS Policy 3.4.6:

- buildings in high risk areas should be temporary and relocatable so they may be removed when the risk of damage becomes imminent; and
- a limited duration for land use consents in high risk hazard areas.

Another policy gives some effect to NZCPS Policy 3.4.5 for new infill subdivision by requiring new subdivision allotments to have sufficient land free of hazards so that further development can be located entirely outside hazard areas.

A policy giving effect to NZCPS Policy 3.4.5 for new greenfield subdivision identifies a wide setback for the greenfield area between Papamoa East and the Kaituna rivermouth. The method suggests that it is intended to incorporate values other than safety from coastal hazards in a wide buffer. However, the rules do not achieve this as they use an exclusively coastal hazard criterion.

² Dahm 2004 reports that Environment Bay of Plenty is in the process of developing indicators to monitor the effectiveness of this objective, with Hill Young Cooper Ltd and Eco Nomos Ltd recently producing a ‘first cut’ of indicators for discussion with the district councils in the region.

³ *Skinner v Tauranga District Council*, A163/2000

⁴ *Skinner v Tauranga District Council*, AP9802

It can be noted that:

- Apart from rules, one method used extensively by the Council to try to reduce net risk is to use the building consent process and the Council's Coastal Hazard Area Building Guidelines. The Council allows re-development of properties provided there is a reduction in the exposure to hazard risk (reduced vulnerability) through relocatable buildings, setback of buildings on properties, long piles, etc.
- The draft coastal hazard provisions that are being developed to satisfy the interim Environment Court reference decision are very different in character to the 1998 proposed provisions. The changes represent evolution (with a focus on implementation) rather than any change in direction. If the August 2002 draft provisions seen by the reviewer were to become operative, they would represent a very clear interpretation and strong implementation of NZCPS policies to coastal hazards at a district plan level. (See Section 4.5 for a review of these draft variations).

Western Bay of Plenty District Plan

The Western Bay of Plenty District Plan became operative on 20 July 2002 after the resolution of references to the Environment Court by Environment Bay of Plenty and a group of beachfront property owners⁵.

The Environment Court decision essentially supported Environment Bay of Plenty's position that all building construction in the coastal hazard zones should have discretionary activity status, in order to acknowledge the significant risk throughout the whole Coastal Protection Area during the next 100 years.

The Environment Court judgment is notable for its attention to the NZCPS. The Environment Court emphasised the need to both plan ahead and be precautionary in the face of evidence of significant hazards, a possible erosion trend, and the likelihood of sea level rise exacerbating any existing inundation and erosion trend (NZCPS policies 3.3.1 and 3.4.2).

The coastal hazard provisions in this District Plan remain somewhat minimalist. The objectives and policies largely repeat the coastal hazard related NZCPS policies, with few extensions and little explanation.

Following the Environment Court decision, the rules better reflect the different levels of risk in the graduated coastal hazard zones.

It can also be noted that:

- A proposed plan change to give effect to the Waihi Beach Growth Strategy would further restrict subdivision and development in the coastal hazard zones. Notably, the rules would make more than one dwelling in the primary risk area a non-complying activity (almost all properties already have a single dwelling), and subdivision in the primary risk area a prohibited activity.
- The Environment Court was advised by the Western Bay of Plenty District Council that more specific provisions await further research, and development of a comprehensive strategy for responding to coastal hazards (and flooding) in the most urgently affected

⁵ Bay of Plenty Regional Council and Waihi Beach Protection Society v Tauranga District Council, A27/2002

areas. (However, that comprehensive strategy may not be imminent – see the Waihi Beach seawalls case study in Section 3.1.3.)

Whakatane District Plan

The Whakatane District Plan is not yet operative, with the proposed plan preparation apparently focused on disposing the several transitional plans. The Council will focus on preparing plan changes later. The Proposed Whakatane District Plan was notified in February 2003, with the hearing of submissions yet to be held.

The proposed plan shows little penetration by, or implementation of, coastal hazard related NZCPS policies, beyond cursory reference. The identification of issues is also undeveloped.

The coastal hazard related NZCPS policies have been ineffective to date in influencing the District Plan of this smaller, less well-resourced council which has not, until recently, had large scale development pressure over much of its coastline.

The district does, however, include an extensive area of beachfront development along Ohope Spit, where consent decisions have resulted in intensification of development in coastal hazard zones and litigation (including an unresolved case before the Building Industry Authority).⁶

It can also be noted that:

- The Whakatane District Council has begun the process of introducing new coastal hazard provisions into its District Plan. The Council has now come under pressure for development on its reserves, and for private residential development in areas where it is increasingly apparent that coastal hazards are present (notably at Ohope Beach).
- A detailed coastal hazard study has now been undertaken of the coastline that was identified as vulnerable in the Areas Sensitive to Coastal Hazards (ASCH) study undertaken by Environment Bay of Plenty. The Tonkin & Taylor report⁷ also recommends management responses that are generally in accord with coastal hazard related NZCPS policies (see Chapter 4 of this report for a review of the recommended management responses).
- The reviewer was advised by council staff that the Whakatane District has an unusual amount of land (in extent and width) along the coastline in Council ownership or designated for reserve. This represents a significant advantage for the Council in reducing the urgency to identify detailed hazard zones along at least the reserved part of the rural coastline. It also simplifies its task of creating precautionary buffers in greenfield areas without having to deal with conflict between protection of public values and protection of private landowner rights and expectations.

Overview of regional policy statement and plans in the Bay of Plenty region

The Bay of Plenty region provides an instructive case study for considering the effectiveness of NZCPS policies in achieving consistent coastal hazard management provisions in the statutory RMA regional policy statement and plans.

⁶ The absence of a planning framework in the District Plan combined with an absence of file material providing reasons for decisions meant that the reviewer could not profitably report on individual consents.

⁷ *Whakatane District Council: Coastal Hazard Analysis*, November 2002, Tonkin & Taylor Ltd.

The preparation of a Regional Coastal Environment Plan (RCEP) by Environment Bay of Plenty provides a good platform for more integrated attention to issues that span the Mean High Water Springs (MHWS) jurisdictional boundary, such as coastal hazards.

The RCEP reveals a considerable focus on coastal hazard issues, and an approach that is guided by (or, at least, in accord with) NZCPS coastal hazard policies. It also reflects other coastal hazard management practices that seek to involve the community, and protect coastal processes and features from activities including hazard response activities.

Environment Bay of Plenty's focus on coastal hazards goes beyond its regional plan provisions. The regional council also works with the district councils in the region on coastal hazard analysis and plan development, as well as actively challenging district plan and resource consent decisions.

Environment Bay of Plenty advocacy has in turn led to confirmation by the Environment Court of the validity of planning approaches promoted by the NZCPS policies. Those Environment Court decisions have cited the important influence of coastal hazard related NZCPS policies on the Court's determinations.

The positive and effective role played by Environment Bay of Plenty is a notable example of good practice.

The analysis of the region's district plans finds plans sitting at different places along the spectrum of coastal hazard management planning in accord with the NZCPS. The overall rating for these three district plans ranges from 'coastal hazards not addressed' to 'coastal hazard provisions substantially consistent with many of the coastal hazard related NZCPS policies' (see Tables 3.1.1–3.1.5).

All three district plans have in common that their coastal hazard provisions are far from settled despite 10 years of the NZCPS, and all three district councils are currently undertaking planning initiatives that will increase consistency with the coastal hazard related NZCPS policies.

3.1.3 Review of consents in the Bay of Plenty region

The implementation of coastal hazard policies for the Bay of Plenty region is here reviewed by examining four consent processes from the Western Bay of Plenty district. These four were clear candidates in terms of the NZCPS coastal hazard policy issues involved:

- Waihi Beach – seawalls (not yet a consent application);
- Waihi Beach – infill subdivision in the Secondary Risk Zone;
- Pukehina Beach – *Carter* - two dwellings on a property in the Primary Risk Zone; and
- Pukehina Beach – single replacement dwelling in the Primary Risk Zone.

These consents were chosen because they span a range of consent application types, and are of sufficient substance to provide insights into the role of the coastal hazard related NZCPS policies in the consent process.

This section summarises the effectiveness of the coastal hazard related NZCPS policies in influencing the deliberations and/or decisions in the consent process.

Refer to Appendix 7 for a more detailed assessment of the consistency of the deliberations and/or decisions with the coastal hazard related NZCPS policies.

Waihi Beach seawalls

The current state of the coastal hazard response proposals at Waihi Beach is that the Western Bay of Plenty District Council has resolved to make an application for rock revetment seawalls at both Two-Mile Creek and Three-Mile Creek.

The decision to choose the seawall construction option is accompanied by proposed changes to the District Plan to further restrict development in the Primary Risk Zone at Waihi Beach.

After a lengthy 10-year investigation process, the Council Committee resolutions explicitly set out the view that the seawalls are *not* the best long-term option, only the best short-term option.

Affordability is the clear barrier to implementing the alternative option which represents both the desired long-term option and the option that is the most sustainable and most in accord with the NZCPS. This would involve stream diversions and limited retreat of development – see Appendix 7.

In the face of this barrier, the coastal hazard related NZCPS policies were not effective in achieving a Council decision that promoted sustainable coastal hazard management.⁸

The coastal hazard related NZCPS policies were effective in placing sustainable coastal hazard management issues and options in front of the community and decision-makers. Those issues and options were contained in expert consultant reports, consultation documents prepared by Council staff, and Council officer reports.

The investigation phase also highlighted the conflict between seawalls and amenity values at beaches that are important to the community, and a lack of understanding of this conflict by some elected Councillors.

The next phase of the consent process will be the applications for the seawalls and then the consideration of those applications. The Mean High Water Springs jurisdictional boundary again creates uncertainty as to which Council (or both) will have authority to grant consents for the proposed seawalls.

Waihi Beach – infill subdivision in the Secondary Risk Zone

This application was lodged with the Western Bay of Plenty District Council in May 2002 and involved a property in the secondary risk coastal hazard zone at Waihi Beach.

⁸ In his peer review, Jim Dahm (Dahm 2004) does not accept that the proposed seawalls are even the best short-term option. He considers that there is a viable and affordable alternative raised by the community that represents a better short-term option. That option is a ‘backstop’ seawall buried further landward in the dune and hence avoiding ‘coastal squeeze’ adverse effects on the much valued beach amenity.

The property has an existing dwelling, and family members wished to subdivide and erect another dwelling. The applicant offered to build a relocatable dwelling.

The surveyor/planning consultants for the applicant undertook their own coastal hazard analysis. That analysis did not accept the extensive analysis supporting the coastal hazard zone delineation that had recently been accepted by the Environment Court in the District Plan reference. The consultant's analysis concluded that in terms of a 100-year planning period, "the property is unlikely to be subject to the effects of coastal erosion".

The application did not rigorously assess the proposal against the coastal hazard related policies in the District Plan, Regional Coastal Environmental Plan or NZCPS: Its conclusion begins:

"To deny our clients the opportunity to utilise the property to its maximum residential potential until the property is untenable due to coastal erosion is under-utilising the coastal land resource."

The outcome of this application is that it was withdrawn following discussions with Council staff. A new 'minor dwelling' was approved for the property instead.

The coastal hazard related NZCPS policies were not effective in influencing this application by a consultant surveyor/planner acting for their property owner clients.

The coastal hazard related NZCPS policies may well have played an effective role (through the District Plan, and Environment Court decision, and Council officer advice) in influencing the property owner's decision to withdraw the application, but this would be difficult to ascertain.

Pukehina Beach – two dwellings on a property in the Primary Risk Zone

The *Carter* application was to construct two substantial dwellings (joined together as a single building) on residential zoned land within the Primary Risk Zone at Pukehina Beach.

The application was publicly notified in 2002 and the primary issues for the opposing submitters (Department of Conservation and Environment Bay of Plenty) were:

- increased pressure for coastal protection works (NZCPS Policy 3.4.5);
- no existing use right for a second dwelling on the site; and
- increased risk from coastal hazards as a result of the increased dwelling density.

The applicant provided a coastal hazard assessment. The Council's expert peer reviewer disagreed with its findings and supported a precautionary approach in the light of existing uncertainty.

The officer report is comprehensively consistent with the coastal hazard related NZCPS policies, with an overall focus on the increased hazard risk that would result for this property (as well as for others whose owners would likely follow in seeking second dwellings, in the officer's opinion).

The application relied to a large degree on the relocatability of the proposed two- dwelling building. However, the officer report warned that the District Plan provisions for relocation were as yet untested and were intended only to enable the reasonable use of a hazard prone private property for a single dwelling.

After assessment, with considerable further reference to the NZCPS in relation to coastal hazards, the officer report recommendation was to decline the application.

The Western Bay of Plenty District Council’s Hearing and Consents Committee granted consent in March 2003. The reasons given were essentially the existence of relocation provisions and that the Committee did not accept the concept of increased coastal hazard risk (or did not consider that the increased risk was contrary to the various plans and policy statements, including the NZCPS). This is despite the ‘no net increase in risk’ objective in the Regional Coastal Environment Plan. (The conditions placed on the consent are essentially identical to the conditions reviewed in the single replacement dwelling case study immediately following.)

Environment Bay of Plenty appealed the decision to the Environment Court⁹, and the appeal was set down for mediation. As at the time of this review, this appeal is still in mediation with no clear indication as to whether the matter will proceed to a hearing.

The coastal hazard related NZCPS policies were effective in achieving (directly and via the regional and district plans) an officer report that interprets the coastal hazard related NZCPS policies with regard to local and national experience of consents in coastal hazard areas.

On the face of it, the coastal hazard related NZCPS policies do not appear to have been effective in achieving acceptance by Councillors of the coastal hazard management planning principle of risk reduction in coastal hazard areas, so as to avoid the demand for property protection works. (An alternative view is that there were other issues of greater priority to the Councillors.) This is despite the single Regional Coastal Environment Plan hazard objective of “no increase in total risk from hazards”.

Pukehina Beach – replacement dwelling in Primary Risk Zone

This is a 2003 application for a dwelling at Pukehina Beach, for a single replacement dwelling.

This application has been included to provide an example of the standard conditions applied by Western Bay of Plenty District Council to single dwellings in the Coastal Protection Area (ie the primary and secondary coastal hazard risk areas).

In summary, the conditions imposed to mitigate the hazard risk (or reduce net risk over time) are:

- setback of 6 metres from seaward boundary;
- dwelling designed and constructed so as to be readily relocatable;
- ‘building relocation strategy’ to ensure dwelling can readily be relocated;

⁹ Environment Bay of Plenty v Western Bay of Plenty District Council 2003.

- requirement to relocate the dwelling once the toe of the foredune is 8 metres from the dwelling;
- covenant on the title to register the consent conditions; and
- Building Act section 36(2) notice on the title.

The full set of the hazard risk mitigation conditions for this single dwelling are attached in Appendix 7.

The reasons for granting the consent include that:

- the new dwelling is set back further than the existing dwelling to be replaced; and
- it is acknowledged that the District Plan allows for one dwelling per lot as a discretionary activity and that a reasonable level of property rights exists for the owner to build a single dwelling on the property.

As stated in the officer report for the two-dwelling consent in the previous example, the efficacy and enforceability of these ‘requirement to relocate’ conditions has yet to be proven with a successful implementation. Community acceptance of such provisions remains a significant issue.

3.2 Auckland region – coastal hazard case studies of the regional policy statement, plans and consents

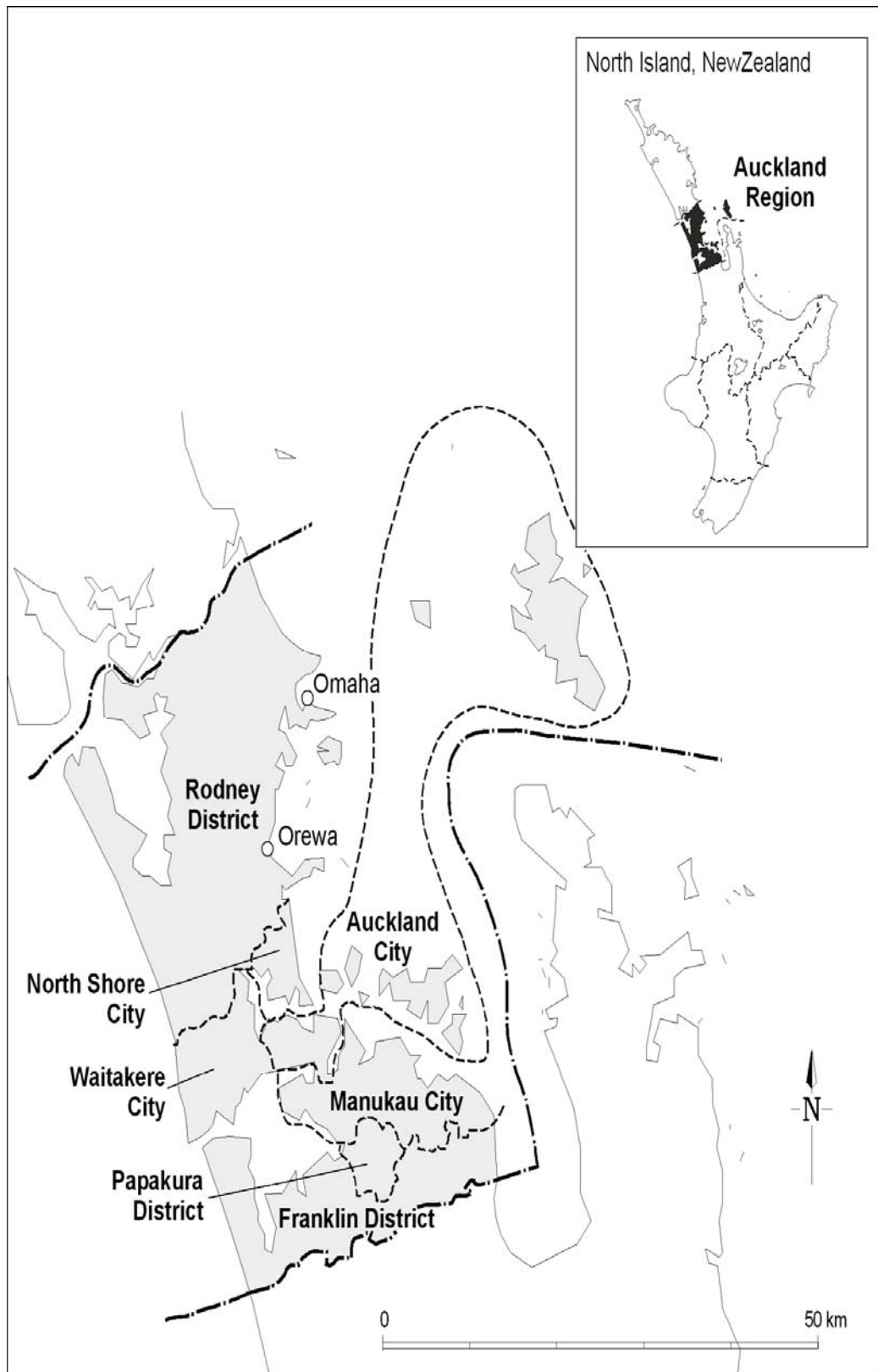


Figure 3: Location map for the districts and sites in the Auckland region

3.2.1 Setting the scene

Auckland region has a varied and in many places intensely developed coastline, with New Zealand's largest city surrounding the Waitemata Harbour and extending to the Manukau Harbour.

Much of that coastline is sheltered from the full force of the open ocean wave environment and is generally subjected to lower wave energies than other regions in New Zealand, which have predominant storm winds coming onshore to coastlines exposed to the Tasman Sea or Pacific Ocean.

Nevertheless, the unstable cliffs of soft sandstones, and the many dynamic spits and beaches mean that the Auckland region experiences a wide range of coastal hazards. The coastal hazards are exacerbated by the closeness of development to the active shoreline in many places.

The port in the Waitemata Harbour is the largest port in New Zealand, with the location in the sheltered harbour and the nature of port development making the port less susceptible to adverse effects from coastal hazards.

The case study policy and plans for this region are the Auckland Regional Policy Statement, the Regional Coastal Environment Plan, and the Rodney District Plan. The reviewer had difficulty finding coastal hazard related consent processes administered by the Auckland Regional Council or Rodney District Council.

The review that was undertaken of resource consent processes in Rodney District was limited by difficulties in obtaining documentation of consents where coastal hazards were an issue. This appears to be as result of an absence of coastal hazard zones, the use of the Building Act consent process to manage coastal hazards, and a difficulty in identifying pertinent consent files.

The consent process case studies therefore comprise a discussion of the Building Act consent process; an analysis of the well documented Omaha South subdivision proposal (actually a special plan variation as an alternative to a resource consent process); and a brief analysis of two minor coastal consents that were provided to the reviewer by council staff.

3.2.2 Assessment of the policy statements and plans in the Auckland region

This section and Tables 3.2.1–3.2.5 summarise the effectiveness of the coastal hazard related NZCPS policies in influencing the provisions in regional and district plans in the Auckland region.

Refer to Appendix 8 for a more detailed assessment of the consistency of the plans with the coastal hazard related NZCPS policies.

Auckland Regional Policy Statement

The Auckland Regional Policy Statement became operative in August 1999.

As for the Bay of Plenty region, the existence of a detailed regional coastal environment plan (RCEP) means that the Regional Policy Statement (RPS) provisions are a general overview of natural hazards, with detailed coastal hazard management left to provisions in the RCEP. This is very apparent when comparing the natural hazards chapter in the RPS (including floods and other hazards) with the chapter in the RCEP devoted to natural coastal hazards.

The RPS provisions are notable for their recognition that:

- there is a need to develop a ‘partnership’ between development and nature;
- traditional protection approaches to hazards may themselves have adverse impacts on the environment;
- there are areas with special values that warrant a different management regime, hence Coastal Protection Areas;
- the coastal environment is composed of finite resources, including sandy beaches and coastal wetlands;
- there is a lack of understanding of coastal processes, and a need for a precautionary approach;
- there is a need for better integrated management, and for identifying ways of working with territorial authorities; and
- a reduction in the costs to the community of dealing with effects of natural hazards is a desired environmental outcome.

Auckland Regional Plan – Coastal

The Proposed Auckland Regional Plan – Coastal was notified in 1995, decisions were released in 1999, and all provisions related to coastal hazards are now in effect operative (proposed variations are unrelated to coastal hazards).

This ‘Auckland Regional Plan – Coastal’ is a Regional Coastal Environment Plan, and the need for integrated management across the Mean High Water Springs boundary is emphasised in the introduction to natural coastal hazards.

The coastal hazard objective does not specifically address the effects of coastal hazard responses, and does not establish the hierarchy of “avoidance then mitigation” promoted by NZCPS Policy 3.2.2.

However, the natural coastal hazards policies that follow the objective are comprehensive in giving effect to almost all parts of the coastal hazard related NZCPS policies, and are notable for their attention to clarity, detail and precision.

The regional plan also gives detailed explanations for each group of policies, with specific reference to most of the coastal hazard related NZCPS Policies.

This is the only plan reviewed that explicitly addresses Policy 3.4.4. NZCPS Policy 3.4.4, which concerns the landward migration of natural coastal features, is combined with NZCPS Policy 3.4.5 (regarding the location of development to avoid property protection works) to give:

New subdivision should be located and designed to avoid interference with natural coastal processes, including those natural features that have a tendency to change or migrate inland as a result of climate and sea-level changes, so that the need for coastal protection measures is avoided.

The policies go beyond the coastal hazard related NZCPS policies by:

- specifically identifying high value areas where coastal protection works shall be avoided if they will damage these special areas;
- requiring that “*the best available estimate of mean sea level rise for the locality in question shall be used*”;
- proposing, in consultation with territorial authorities, ongoing research into and development of coastal hazard management tools (implemented to date with the publication in July 2000 of the *Auckland Coastal Hazard Strategy and Coastal Erosion Management Manual*);
- proposing an educational strategy to increase public awareness and understanding of coastal hazard risks; and
- supporting the development of Comprehensive Coastal Management Plans which take an integrated approach to managing coastal hazards (four such studies have already been undertaken by the ARC with different territorial authorities in their region¹⁰).

As with the NZCPS itself, there is no outcome vision.

In summary, the Auckland Regional Plan – Coastal has given effect to the coastal hazard related NZCPS policies to a high degree at the regional plan level, and has gone beyond them to embrace other sustainable coastal hazard management techniques and methods that have developed in New Zealand in the 1980s and 1990s.

It can also be noted that, as set out in its Coastal Hazard Strategy, the Auckland Regional Council wishes to promote coastal hazard zone identification at a district level.

¹⁰ Muriwai Coastal Hazard Management Strategy, June 2002, Coastline Consultants Ltd.
Coastal Hazards and Management: Hudson's Beach, Manukau Harbour, July 2001, Coastline Consultants Ltd.
Browns Bay: Coastal Hazards and Management, June 2002, Coastline Consultants Ltd.
Onetangi Beach Coastal Hazard Management Strategy, March 2002, Tonkin & Taylor Ltd.

Rodney District Plan

The Proposed Rodney District Plan was notified in 2000 and is not yet operative.

The Rodney plan does not identify coastal hazard zones as required by NZCPS Policy 3.4.1 (a characteristic shared with the plans of all the other territorial authorities in the Auckland region). All other provisions need to be read in this light.

There is also no specific chapter on coastal hazards, as opposed to the more general natural hazards. Most of the policies are not specific to coastal hazards, and there is little guidance as to how to apply the policies to coastal hazard management (particularly in light of the absence of coastal hazard zones).

Many of the District Plan policies give only partial effect to the coastal hazard related NZCPS policies. The NZCPS has not been effective in promoting provisions that fully and specifically apply the coastal hazard related NZCPS policies to Rodney district (see following discussion of reasons).

In the rules part of the plan, complex tables to control development in six different residential zones (none of them identified as prone to coastal hazards) have the effect of allowing buildings and a single dwelling anywhere landward of the ad hoc shoreline yards (ie development setbacks). A discretionary activity consent is required for multiple dwelling units.

Finally, there is the Special 16 (Omaha South Development) Zone which sets out the conditions for the development of the new Omaha South subdivision. This subdivision is reviewed below along with Rodney District consents, as this special zone is in the nature of a private plan change undertaken as an alternative to obtaining subdivision consent.

In summary, the Rodney District Plan contains many general policies, and some specific policies for managing coastal hazards. However, there is no clear identification of where hazards exist or the degree of hazard at any particular site, and no clear or (apparently) coherent way of managing the particular challenges arising from coastal hazards.

It can also be noted that, at the time of writing, there are no proposals to alter the scheme of the District Plan to specifically deal with coastal hazards, or to give effect to NZCPS Policy 3.4.1 by identifying hazard areas.

In fact, in its Coastal Management Strategy Review, adopted 30 June 1999, the Rodney District Council states explicitly that:

The Council does not intend to carry out, or get involved with, detailed studies to determine the suitability of land adjacent to the coast (from a natural hazards point of view) for subdivision and development. The responsibility to satisfy the Council that the land that is intended to be subdivided, built upon, or otherwise developed is stable, rests with the owners.

This appears to be a charter for not planning ahead, other than with ad hoc assessments, and for not acting until it is too late to avoid significant hazard risk and adverse effects.

The Council appears particularly reluctant to identify hazard zones in areas with *existing* development, because of perceived consequences for property owners, and the likelihood of litigation from property owners. Council staff advise that a higher priority for Council effort is to achieve good outcomes for greenfield sites such as Omaha South.

The non-statutory Coastal Management Strategy Review 1999 also refers to dividing the length of coastline into 38 separate compartments and then progressively preparing a management plan for each compartment.

One of those coastal compartment plans already completed is the Omaha Coastal Compartment Management Plan, 2003. However, in line with the District Plan and the Coastal Management Strategy Review, reference is made to general trends of erosion and accretion, but no action is proposed on coastal hazards other than ongoing monitoring and the maintenance of existing groynes and seawalls. There is, elsewhere in the management plan, a focus on dune care as protection from coastal hazards.

In the absence of a detailed coastal hazard analysis, there is little prospect of an integrated approach to coastal hazard management developing from this or other coastal compartment plans.

Overview of Plans in the Auckland region

The Auckland region has a high population. This means that the councils there have substantial resources for planning in comparison with other regions, but that the coastline is already largely urbanised.

The Auckland Regional Council has used its substantial resources to prepare a regional coastal environment plan that has carefully and methodically drawn on coastal hazard related NZCPS policies (as well as other coastal hazard management techniques) and developed them to apply to the Auckland region. This is assisted by the guidance and specific methodologies in the *Auckland Coastal Hazard Strategy and Coastal Erosion Management Manual*, published in July 2000.

However, an urbanised coastline (including coastal hazard areas) means that it is too late for avoidance on a large scale of the coastal hazards and coastal hazard risk.

The Auckland councils, particularly the territorial authorities, therefore face the challenge of undertaking the more difficult task of coastal hazard management planning for coastal hazard areas where high value development is already established.

That challenge includes dealing with the owners of high value coastline property who are likely to resist hazard reduction measures involving coastal hazard zoning. Such measures are perceived as impacting on their property values (despite rapidly rising coastline property values even where hazard zones are in place elsewhere in New Zealand, including in the other case study regions).

Concerted landowner resistance goes a long way towards explaining the reluctance of territorial authorities in the Auckland region to identify hazard zones.

The experience of the Auckland region indicates some success for the NZCPS in playing an effective role in:

- the inclusion of good and comprehensive coastal hazard management provisions in a regional plan; and
- the development of a greenfield subdivision at Omaha that has achieved coastal hazard avoidance and coastline value protection into the future.

These examples are considered good practice.

The experience of the Auckland region also highlights a challenge for the NZCPS (and the discipline of coastal hazard management planning in general) in achieving a reduced coastal hazard risk for existing hazard prone settlements, and even achieving the basic building block of coastal hazard zone identification.

The NZCPS policies in their current form, and with the current implementation mechanisms, have failed at the territorial authority level in the Auckland region. While it is evident that there would be long-term benefits to both private assets and public assets and/or coastline values from hazard reduction, property owners and their territorial authorities also fear that there would be short-term costs and adverse effects for the current owners of those private assets.

The preparation of the four site-specific integrated coastal hazard management strategies/action plans for existing settlements experiencing coastal hazards, by the regional council and territorial authority, with buy-in from residents, is an important initiative towards sustainable coastal hazard management at those localities at least.

3.2.3 Review of consents in the Auckland region (and a special zone plan variation)

The implementation of coastal hazard policies for the Auckland region is here reviewed by examining three different types of ‘consent process’ in Rodney District (these being the only case studies involving consideration of NZCPS coastal hazard policy matters that were found by the reviewer during meetings with Rodney District Council staff):¹¹

- The Omaha South subdivision
- A seawall proposal at Scotts Landing, and a new dwelling infringing a 6 metre shoreline yard
- Building consents in lieu of resource consents

This section summarises the effectiveness of the coastal hazard related NZCPS policies in influencing the deliberations and decisions in the consent process.

Refer to Appendix 9 for a more detailed assessment of the consistency of the Omaha South subdivision with the coastal hazard related NZCPS policies.

¹¹The reviewer acknowledges that these consent case studies are far from a satisfactory representative sample for the Auckland region. If time and resources had allowed, another territorial authority in the Auckland region would have been reviewed, and further efforts made to identify any regional consents, in order to examine the outcome of district plans without coastal hazard zones.

Omaha South subdivision

A subdivision at Omaha in the 1970s has the dubious distinction of being one of the better known examples of unwise sandspit development in New Zealand. Beachfront development was halted and some properties abandoned after severe erosion during July 1978.

The Omaha South subdivision considered here is at the base of the Mangatawhiri Spit, further from the spit tip than the earlier 1970's subdivision.

The Omaha South proposal, made in 1998, was for a large greenfield subdivision with capacity for 600 dwellings. The subdivision site included substantial dunes as well as wetlands and native wetland forest remnants.

The subdivision proposal was pursued by way of a plan variation to set up a special zone in the Rodney District Plan, rather than by way of a resource consent. This has become the Special 16 (Omaha South Development) Zone in Chapter 12 of the District Plan.

The overall subdivision proposal was developed by Boffa Miskell Ltd with a coastal hazard assessment from Tonkin & Taylor Ltd¹².

The coastal hazard assessment first assessed an Erosion Risk Zone, taking account of sea level rise and other factors up to the year 2100. A Coastal Management Zone was then assessed for a 100-year planning period, which went beyond erosion risk to allow for dune movement and roll over (migration).

The 60–70 metre setback thus derived was considered to be precautionary and conservative, and fairly closely corresponds with the wide esplanade reserve already in existence.

In addition, the applicant was to fence and revegetate a large part of the esplanade reserve, and contribute \$50,000 for a “beach care programme”.

The outcome is to comprehensively give effect to the coastal hazard related NZCPS policies.

It presumably also achieves assurance into the future of a high level of amenity and recreational values, as well as freedom from coastal hazards, for prospective purchasers looking for a coastal home with quality access to natural dunes and beaches. These subdivision attributes would be reflected in the return to the developer.

Despite little direct reference to the NZCPS in the consent documents reviewed, it is not unreasonable to speculate that, along with the earlier storm damage in the vicinity, the NZCPS has been effective in playing a role in establishing the regulatory expectations for greenfield coastal subdivision for the developer, the development designers, and the Council.

A seawall and a shoreline yard infringement

No subdivisions or multiple dwelling consents in areas that might be subject to coastal hazards were provided to the reviewer by Rodney District Council staff.

¹² *Omaha Development: Revised Coastal Hazard Assessment*, July 1998 Tonkin & Taylor.

Of the files found for beachfront activity consents, only two appeared pertinent to this review. Those consent files for minor shoreline activities addressed coastal hazards in a cursory fashion, without reference to the coastal hazard related policies in the district and regional plans or the NZCPS. Little can be inferred from these consents in the absence of hazard information.

In summary, such consents do not indicate a strong penetration of the coastal hazard related NZCPS policies into minor consents, either directly or indirectly through regional and district plans.

Building consents

This analysis is based on discussions with Rodney District Council consents and engineering staff, as no building consent documentation has been provided to the reviewer.

As building a single dwelling outside the coastal yards/setbacks is a permitted activity in the district, control of development is achieved primarily through Building Act consent requirements and/or conditions.

In essence, the onus is on the property owner or developer to demonstrate that a proposal is sustainable, and then a building consent is granted at their risk with a Building Act section 36(2) notice as appropriate.

Applications are vetted using a register comprising the ad hoc hazard assessments, and also rule of thumb methods for assessing the level of hazard likely. For example, whether there is raised land or a 100m³/m (cubic metres per lineal metre of coastline) sand storage buffer seaward of the site.

This reliance on building consents to control development in potentially hazard prone areas is outside the integrated approach promoted by the Resource Management Act and the NZCPS.

Overview of Rodney District “consent processes”

For the major greenfield development at Omaha South, where the hazard identification was of the same standard as general hazard zoning in other District Plans, good practice in accordance with the coastal hazard related NZCPS policies has been achieved.

For the other consents, it is difficult to assess without the foundation of coastal hazard zone identification and associated policies and rules, whether or not consents are addressing coastal hazards in a way that will achieve sustainable coastal hazard management outcomes in the future.

Also, just as coastal hazard provisions are distributed through the Rodney District Plan and somewhat difficult to find, the consents with a hazard component in their consideration are distributed around the general residential zone and appear difficult to track down in the Council files.

3.3 Greater Wellington region – coastal hazard case studies of the regional policy statement, plans, district plans and consents

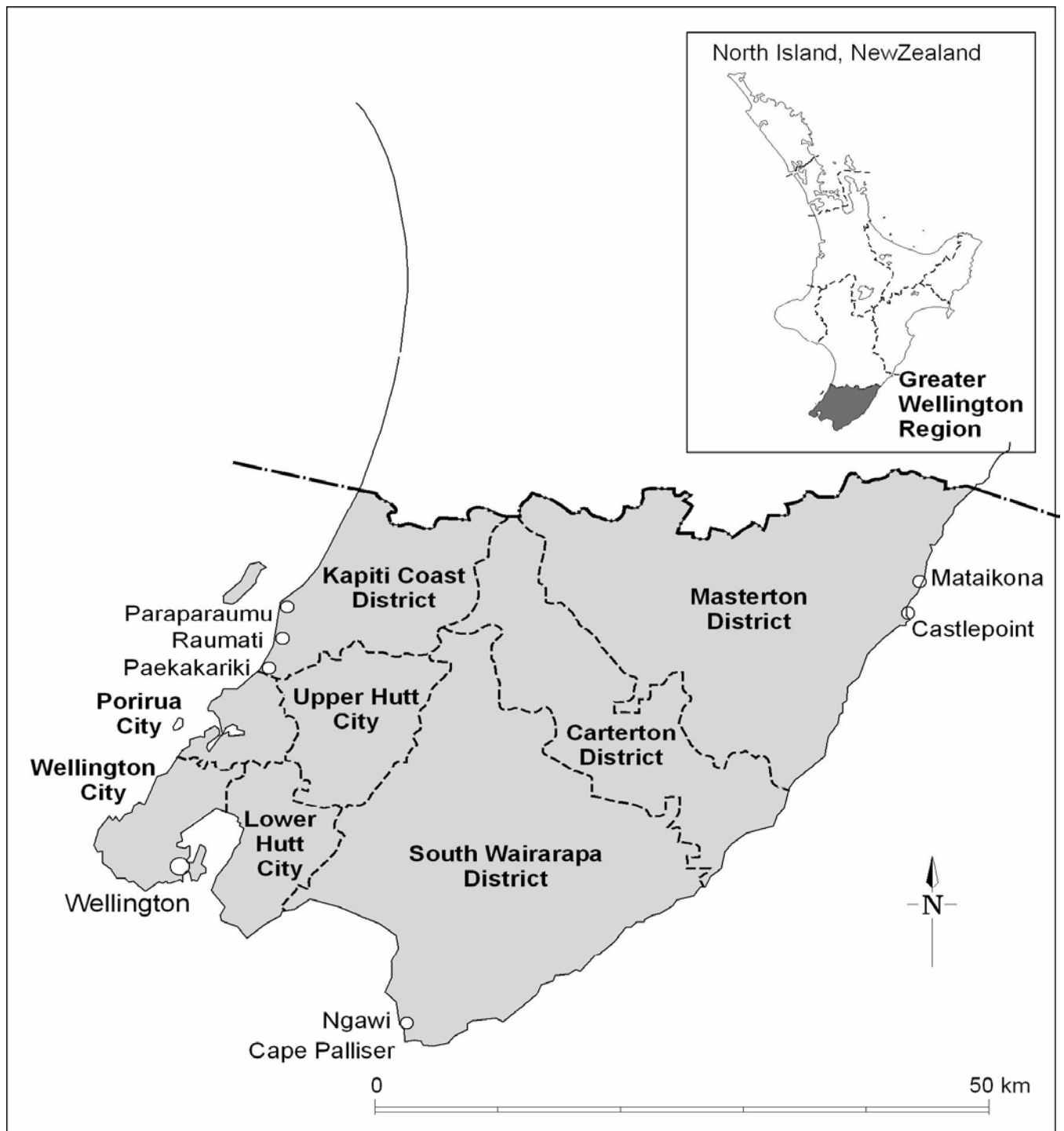


Figure 4: Location map for the districts and sites in the Wellington region

3.3.1 Setting the scene

The greater Wellington region has a varied coastline, with the main urban development and most suburban development along a rocky coastline with little significant coastal hazard.

The soft coastlines of the districts covered in this review are less intensely developed than in Auckland or Tauranga, with the exception of the Kapiti Coast where Paraparaumu, Raumati and Paekakariki are subject to both coastal hazards and increasingly intensive development.

The Kapiti Coast has part of its sandy coastline sheltered by Kapiti Island from the full force of predominant storm winds. However, that shelter has built the Paraparaumu ‘bulge’ which has been acting like a groyne for the last 2000 years, depriving the coastline to the south of the sediment supply from the rivers to the north. Raumati and Paekakariki are, as a result, experiencing a long-term trend of erosion. There is also a risk of tsunami, with a long return period of around 400 years for significant tsunami inundation along the Kapiti Coast¹³.

The Wairarapa Coast by comparison is an exposed rocky coastline with isolated embayments and beaches on a narrow coastal strip backed by hills. The coastline is characterised by episodic erosion (that may in future become a trend of coastal erosion as the result of climate change) and tsunami risk.

The case study, policy and plans for this region are the Greater Wellington Regional Council’s Policy Statement, the Wellington Regional Coastal Plan, the Masterton District Plan, the South Wairarapa District Plan, and the Kapiti Coast District Plan.

Three consents from the Kapiti Coast district and one consent each from Masterton and South Wairarapa districts were selected as the consent process case studies for the Wellington region.

The ‘Water’s Edge’ subdivision temporary seawall in Paraparaumu is a prominent and controversial development that provides insights into a number of issues for coastal hazard related NZCPS policies. The *Henry* subdivision in Raumati provides a case study of a consent for subdivision where the District Plan relies on the section 106 restriction on subdivision of hazard prone land, and also relies on relocatable building design to allow multiple dwellings as a permitted activity on hazard prone land. The infill subdivision at Rosetta Road, Raumati further underscores the Henry issues, as well as providing insights into issues that flow from reliance on seawalls and hazard zones that are in need of upgrading and updating respectively.

The two Wairarapa consents are simply the only two coastal consents found for that area with a substantive coastal hazard component.

¹³Kotuku Parks Ltd v Kapiti Coast District Council A73/2000, Dr Goff evidence in Para [113]. Two papers co-authored by Dr Goff are useful references for the occurrence and impacts of large tsunami in New Zealand: “Catastrophic seismic-related events and their impact on prehistoric human occupation, coastal New Zealand, 2000” and “Catastrophic Events in New Zealand coastal environments, 2001”.

3.3.2 Assessment of the policy statement and plans in the Greater Wellington region

This section and Tables 3.3.1 – 3.3.5 summarise the effectiveness of the coastal hazard related NZCPS policies in influencing the provisions in regional and district plans in the Greater Wellington region.

Refer to Appendix 10 for a more detailed assessment of consistency with the coastal hazard related NZCPS policies.

Regional Policy Statement for the Wellington Region

The Regional Policy Statement for the Wellington region needs to be assessed in the context that there is no Regional Coastal Environment Plan in this region (only a Regional Coastal Plan), and hence the Regional Policy Statement (RPS) is the only regional document that has the opportunity to comprehensively address the cross-boundary nature of coastal hazards.

It would be possible to read the Regional Policy Statement without realising that coastal hazards are a significant resource management issue or a significant natural hazard issue in the region.

There are many general policies contained in the RPS that could be used in guiding the assessment of coastal hazard management proposals, but few policies give specific guidance on how to meet the particular challenges of coastal hazard management.

There is frequent use of terms such as ‘appropriate’ and ‘acceptable’ in policies, rather than having policies that specify just what is appropriate or acceptable in the Wellington region.

There is no identification of coastal hazard prone areas in the policy statement, and district plans are stated to be the appropriate place for hazard area identification.

The Natural Hazard section methods recognise the role of the regional council in disseminating information, and assisting district councils in gathering information. (The development of the draft Wairarapa Coastal Strategy would be an example of such assistance – see Section 4 below.)

There is a notable recognition that it is desirable to distinguish between long-term trends of coastal erosion and short-term fluctuations, on the basis that they require different responses and different forms of management.

Also notable is a policy that, before activities are approved, any changes in the likelihood or consequence of natural hazard events that may result are “explicitly recognised and accepted”. Giving full effect to this policy would require explicit long-term scenarios, for example, the long-term effects of seawalls on beaches and the effects long-term of the intensification of development behind seawalls.

Tsunami risk is discussed and there is a focus on preparing the community for hazard events. Both matters are picked up in the District Plans in the region.

Regional Coastal Plan for the Greater Wellington region

Of the three regional plans assessed, this is the only one which is a regional coastal plan as opposed to a regional coastal environment plan¹⁴. It became operative in May 2000.

It is also the only regional plan assessed which has sections reflecting the different *activities* in the coastal marine area, rather than reflecting *issues* such as coastal hazards.

A regional coastal plan is effectively limited to considering activities and resources in the coastal marine area. Along with the non-specific Wellington Regional Policy Statement, this creates an absence of specific regional guidance on coastal hazard management. This is reflected in Tables 3.3.1–3.3.5.

As with the Regional Policy Statement, there is frequent use of terms such as ‘appropriate’ and ‘acceptable’, rather than policies that specify just what is appropriate or acceptable in the Wellington region.

A general vision for natural hazards is to “not increase risk from natural hazards beyond an acceptable level”. An ‘acceptable level of risk’ is not defined for the Wellington region.

The plan addresses the likelihood of sea level rise, with reference to Intergovernmental Panel on Climate Change (IPCC) predictions¹⁵.

In summary, with a non-specific Regional Policy Statement and a Regional Coastal Plan that cannot properly address the cross Mean High Water Springs boundary issue of coastal hazards, the coastal hazard related NZCPS policies have been ineffective in promoting regional plan provisions that can promote sustainable coastal hazard management in the Greater Wellington region.

Kapiti Coast District Plan

The Kapiti Coast District Plan became operative in July 1999. The District Plan coastal hazard provisions rely on hazard zones derived from the coastal hazard assessments of Dr Jeremy Gibb in 1978, following the series of storms in 1976 that caused erosion and damage in Raumati¹⁶.

The District Plan coastal hazard zones are not as wide as recommended by Dr Gibb at that time, nor were they updated or extended following further recommendations in a report to the Council by Dr Gibb in 1994¹⁷, or as part of the preparation of the District Plan up to 1999. (The May 2003 draft Kapiti Coastal Erosion Strategy, reviewed in Section 4 following, updates the coastal hazard zones and is intended to lead to District Plan changes in the near future¹⁸.)

¹⁴See Appendix 5 for a discussion of peer review comments concerned at the inclusion of only one region with a Regional Coastal Plan. There are seven Regional Coastal Environment Plans and ten Regional Coastal Plans in New Zealand.

¹⁵Intergovernmental Panel on Climate Change: *Climate Change 2001: Working Group II: Impacts, Adaptation and Vulnerability*, (IPCC) 2001

¹⁶*The problem of coastal erosion along the Golden Coast*, western Wellington, New Zealand, 1978, Gibb

¹⁷Sustainable management of the coastal environment administered by the Kapiti Coast District Council, 1994, Gibb.

¹⁸“Strategies for Managing Coastal Erosion Hazards on the Kapiti Coast”, May 2003 draft, Lumsden et al.

As with the Regional Policy Statement, river flooding is identified as the most significant natural hazard in the Kapiti Coast district. The significance of coastal erosion and seawalls on the character of this coastal district is not highlighted.

The District Plan policies give only partial effect to the coastal hazard related NZCPS policies, with support for the status quo where seawalls are in place.

There are policies to promote community awareness and avoidance of natural hazards, and to ensure appropriate performance standards and uses in coastal hazard zones. The District Plan rules, however, provide for subdivision as a controlled activity throughout the Residential Zone, without a controlled activity standard requiring a coastal hazard free site. On the face of it, this is clearly inconsistent with at least NZCPS Policies 3.2.1 and 3.2.2.

The District Planner has advised that the permissive subdivision rules are based on avoiding duplication of subdivision controls contained in section 106 of the Resource Management Act (which prohibited subdivision of hazard prone land under certain circumstances at the time, although amendments to the RMA in 2003 have since made refusal discretionary¹⁹). The permitted activity standard requiring buildings to be of relocatable design may also have encouraged the permissive subdivision rules. (See the review of consents following for an insight into the consequences of this approach.)

The rules contain standards for development in the coastal hazard zones. The identified coastal hazard area in the Residential Zone is divided into:

- a 20 metre ‘no build’ zone and a 30 metre wide ‘relocatable’ zone behind it, along those areas south of Paraparaumu historically subject to a trend of erosion; and
- a 20 metre “no build” zone only, along those areas of Paraparaumu north of the bulge where there was historically a trend of erosion.

(See the review of consents following in Section 3.3.3 for an insight into the consequences of not adopting the 40-50 metre setback for development along the whole coastline as recommended by Dr Gibb in 1978 and 1994.)

The rules and standards provide for multiple dwellings in the secondary risk ‘relocatable’ hazard zone as a permitted activity even if the property is entirely in that coastal hazard zone.

¹⁹**106. Consent authority may refuse subdivision consent in certain circumstances**

(1) Despite section 77B, a consent authority may refuse to grant a subdivision consent, or may grant a subdivision consent subject to conditions, if it considers that –

(a) the land in respect of which a consent is sought, or any structure on the land, is or is likely to be subject to material damage by erosion, falling debris, subsidence, slippage, or inundation from any source; or

(b) any subsequent use that is likely to be made of the land is likely to accelerate, worsen, or result in material damage to the land, other land, or structure by erosion, falling debris, subsidence, slippage, or inundation from any source; or

(c) sufficient provision has not been made for legal and physical access to each allotment to be created by the subdivision.

(2) Conditions under subsection (1) must be –

(a) for the purposes of avoiding, remedying, or mitigating the effects referred to in subsection (1); and

(b) of a type that could be imposed under section 108.

1991 *Resource Management Act* Part 6 – 77 (30/09/2003)

(Again, see the review of consents in Section 3.3.3 for an insight into the consequences of this approach. Multiple dwellings are often a precursor to subdivision.)

The requirement for relocatable *design* for buildings (as opposed to practicable relocatability) in the secondary risk zone, and the absence of any covenant on the property title which requires relocation in the event of imminent threat, means that there would be difficulties moving many ‘relocatable’ dwellings as an alternative to other responses.

In the Rural Zone, there is a 100 metre ‘coastal yard’ setback to deal with coastal hazard and other natural character issues. This setback is in excess of estimates of likely coastal hazard extent in rural areas for at least 100 years. Subdivision and multiple dwellings in the Rural Zone are a discretionary or non-complying activity.

In summary, while the Kapiti Coast District Plan contains several policies promoting the coastal hazard related NZCPS policies, the failure to give effect to these policies in the residential rules, and the failure to update the coastal hazard zones, has rendered the NZCPS largely irrelevant and ineffective in the residential areas affected by coastal hazards.

The coastal hazard related NZCPS policies may have been more effective in promoting sustainable coastal hazard management for undeveloped areas, although other factors (including NZCPS natural character policies) have played a large part in determining the Rural Zone rules.

It can also be noted that the shortcomings of the existing 1980 hazard zones and the rules controlling development in these hazard zones are recognised by the Council. Action to address the shortcomings has been awaiting the major plan changes that are likely to follow the current Kapiti Coastal Erosion Study. Recommendations for District Plan changes were specified as an explicit output of that study.

This is another example of the long lead times involved in changing statutory RMA plans even where problems, and the need for changes to provisions, are recognised.

The May 2003 draft “Strategies for Managing Coastal Erosion Hazards on the Kapiti Coast” is reviewed in Section 4 following.

The Masterton and South Wairarapa District Plans

Masterton district is facing coastal hazard problems at Castlepoint and Riversdale beaches, and elsewhere along the coast.

South Wairarapa has serious problems in Palliser Bay with both beaches and roads being threatened, or actually washed away, by coastal erosion.

There are increasing pressures for residential development on the narrow coastal strip along this coast.

These districts are considered together in this review because of the work underway by a consortium of the Masterton, South Wairarapa and Carterton District Councils to prepare a “combined district plan.”

Also underway is the preparation of a Wairarapa Coastal Strategy by the three district councils, two Wairarapa iwi (Rangitaane o Wairarapa and Ngati Kahungunu ki Wairarapa) and the Greater Wellington Regional Council.

The “combined district plan” is expected to draw heavily on the Wairarapa Coastal Strategy for coastal management provisions, including coastal hazard provisions, once the strategy is finalised.

It can be noted that these district plans are included in this review for completeness and to span the full range of district plan consistency. Also, perhaps more importantly, to demonstrate that even in poorly resourced rural councils, efforts are being made to improve coastal management planning, and the NZCPS will have increasing effect as district plans are reworked.

The initiative to prepare a “combined district plan”, and also to prepare a Wairarapa Coastal Strategy with local iwi and the Greater Wellington Regional Council that will feed into that combined district plan, demonstrates that there are a number of ways for councils to progress their coastal planning. Councils are using some novel approaches as priorities and resources allow.

The draft Wairarapa Coastal Strategy is reviewed in Section 4 following.

The Masterton District Plan provisions

The Masterton District Plan is operative and reveals little penetration by the coastal hazard related NZCPS policies or by the more recent concepts of coastal hazard management that have developed alongside the NZCPS (eg risk reduction).

Tables 3.3.1–3.3.5 reflect the lack of specific attention to coastal hazards and the lack of uptake of NZCPS coastal hazard policies in this District Plan.

South Wairarapa District Plan provisions:

No summary table has been completed for the South Wairarapa District Plan. The District Plan of this poorly resourced district council shows very little uptake of the coastal hazard related NZCPS policies. Specific references to coastal hazards are few.

The one specific reference to “relevant NZCPS policies in the District Plan” omits any mention of the NZCPS Section 3.4 coastal hazard policies.

Overview of plans in the Greater Wellington region

The Wellington region is an instructive contrast to the Bay of Plenty and Auckland regions for consideration of the effectiveness to date of NZCPS policies in relation to coastal hazards and coastal hazard responses.

The absence of a Regional Coastal Environment Plan that can more readily contain a comprehensive and detailed section to deal with the cross-boundary issue of coastal hazards (and the failure of the Regional Policy Statement to fulfil that role in the absence of a

Regional Coastal Environment Plan) may well have played a role in the poorer uptake of the coastal hazard related NZCPS policies in the Wellington regional documents and the district plans.²⁰

In the Kapiti Coast district, where there is a serious coastal erosion hazard, hazard zones were defined around 1980. However, those hazard zones have not been updated in the District Scheme/Plan since then, and there has been only partial adoption of the coastal hazard related NZCPS policies in the operative District Plan prepared in the late 1990s.

In addition, the failure in the Kapiti Coast District Plan rules to require at least a restrictive discretionary activity consent for subdivisions or multiple dwellings in coastal hazard zones within the Residential Zone, renders the NZCPS largely irrelevant and ineffective in the Kapiti coastal hazard areas where there is existing development.

In the Wairarapa, where the main townships are inland along State Highway 2, where pressure for new or expanded coastal settlements is relatively recent, and where the rural councils have less resources for planning, there has been little penetration into the operative district plans of the coastal hazard related NZCPS policies.

The consultation undertaken by the reviewer indicates that it is common for territorial authorities to be reluctant to undertake forward planning (and property owners to accept forward planning) to prevent the difficulties and costs of addressing coastal hazards once development has already taken place. However, looking to the future, a new Kapiti coastal erosion strategy has now appeared in draft form, and is recommending District Plan provisions that should give better effect to the coastal hazard related NZCPS policies.

Also, the pooling of resources by the three rural Wairarapa councils and a joint initiative with the Greater Wellington Regional Council to develop a Wairarapa Coastal Strategy should result in a combined district plan with improved coastal hazard management provisions.

Therefore, it is apparent that, 10 years after gazettal, the NZCPS has had only modest success in gaining the inclusion of consistent coastal hazard provisions in the statutory policies and plans in the Wellington region.

However, the region's district plans are far from settled, and the coastal hazard related NZCPS policies are still having effect in the active evolution of those district plans. That evolution is in the direction of consistency with NZCPS coastal hazard policies but it is too early in the process to judge to what extent. Little assistance will be gained from the Regional Policy Statement and Regional Coastal Plan in their current form.

3.3.3 Review of consents in the greater Wellington region

The implementation of coastal hazard policies for the greater Wellington region is here reviewed by examining selected consents in Kapiti Coast, Masterton, and South Wairarapa. It is noted that, atypically, seawall applications have been deemed to be coastal permit applications and hence were processed by the regional council.

²⁰See Appendix 5 for peer review comments on the ability of Regional Coastal Plans and Regional Coastal Environment Plans to address integrated coastal management.

Kapiti Coast district:

- The Water's Edge subdivision temporary seawall, Manly St, Paraparaumu – Greater Wellington Regional Council consent
- The infill subdivision at 111 Rosetta Road, Raumati – Kapiti Coast District Council consent
- The *Henry* Subdivision at 41–45 Wharemauku Road – Kapiti Coast District Council consent

Masterton district:

- Mataikona seawall – Greater Wellington Regional Council consent

South Wairarapa district:

- Te Kopi boulder beach – Greater Wellington Regional Council consent

This section summarises the effectiveness of the coastal hazard related NZCPS policies in influencing the deliberations and decisions in the consent process.

Refer to Appendix 11 for a more detailed assessment of consistency with the coastal hazard related NZCPS policies.

Kapiti Coast: the Water's Edge subdivision temporary seawall – Greater Wellington Regional Council

Background

This 1989 subdivision of four dwellings, called the “Water's Edge subdivision”, juts out towards the sea beyond the long line of other dwellings along Manly Street in Paraparaumu.

In around 1995, an erosion cycle began. By 1998/99 almost 20 metres of erosion had occurred and even ordinary tides were whittling away the dune not far from the dwellings, as the sand dune erosion scarp along that section of coastline collapsed during high tides.

The 1999 proposal for a temporary seawall of large concrete blocks on geotextile was deemed to be in the coastal marine area, and hence an application was prepared for a coastal permit from the then Wellington Regional Council (WRC).

The application was received and the works to construct the seawall began the next day with the permission of the WRC Consents Manager on the basis that they were “urgent to protect the integrity of the four houses”.

Non-notified consent was granted retrospectively shortly afterwards in June 1999. The officer report makes no reference to the NZCPS. The brief discussion in the report of the effects of the seawall on natural character is limited to an observation that planting will soften the seawall appearance, and that the natural character of the site is already compromised by both the Water's Edge subdivision itself and two Council stormwater drainage outfalls crossing the beach.

Consent was granted for five years subject to conditions, including removal if the erosion was excessive. There was no condition requiring the development of alternative feasible responses or strategies by the property owners.

Since the consent

End effect erosion has occurred, along with undermining and slumping of the concrete blocks, requiring maintenance on several occasions.

There have also been times when beach levels have been high and, after a decision by the now Greater Wellington Regional Council to notify an application to extend the seawall, the property owners have questioned whether the seawall is in fact on land and the coastal permit thereby irrelevant.

This implies that an application could be made to the Kapiti Coast District Council in due course for a land-use consent for the seawall.

The property owners have also filed a civil litigation suit against the Kapiti Coast District Council for granting the subdivision consent in 1989 in an area that was prone to coastal hazards.

Issues raised

The NZCPS has been ineffective in achieving specific policies in the regional planning documents that were available for consideration with this application. Similarly, the NZCPS has been ineffective in directly affecting the consent process.

Perhaps more pertinent to this consent process is that, in the absence of a strategy developed in advance of imminent threat, it was probably irrelevant what policies were in place. The work was undertaken prior to the formal consideration of policies or the granting of consent.

Notably, although the technology clearly exists that would enable relocation of the dwellings, the option of relocation has not been considered. There is no space within each property to relocate the dwelling further back within the property, and relocation off site is clearly a very costly and unpalatable option to the property owners.

While councils can readily grant consents for a limited duration to an engineered seawall built of permanent materials, it is an entirely more difficult matter to get the works removed after the consent expires.

While councils can readily grant consents for buildings that are relocatable (not applicable in this case as no hazard was recognised by the Council), there will be enormous resistance to actually relocating the buildings as an alternative to hard engineering property protection works.

There is further uncertainty created by the jurisdictional issue of the Mean High Water Springs boundary. During an accretion phase of the natural dynamic beach movements, the property owners have the option of seeking consent from the Kapiti Coast District Council rather than a new consent from the regional council.

The Kapiti Coast District Council is in the difficult position of being the grantor of the subdivision consent, the owner of the reserve land on which the seawall is built, the respondent in civil action by the property owners, and also possibly being the consent authority for a consent to extend the life of the temporary seawall.

This subdivision and development has become a costly exercise for the property owners, the territorial authority and the regional council. There is no clear end in sight. The situation is another clear demonstration that “prevention is better than cure”.

Kapiti Coast: The Infill Subdivision at 111 Rosetta Road, Raumati – Kapiti Coast District Council

Background

The site of this 2001 subdivision proposal is along the part of the Raumati beachfront severely affected by erosion during the 1976 storms. There is a 6 metre high dune erosion scarp along this section of Raumati.

Because of the long-term trend of erosion, there is a 20 metre ‘no-build’ high risk hazard zone and a 30 metre ‘relocatable zone’.

Because the hazard zones had not been updated since 1980, the 20 metre no-build zone had already been eroded away at the time of the proposal being made. The zone boundary was defined by map and did not move inland with the advancing erosion.

The property extends from the sea to Rosetta Road, and was therefore large enough for subdivision as a controlled activity (there being no controlled activity standard requiring a coastal hazard free site in the District Plan).

The only substantive control on subdivision at this site was therefore through section 106 of the RM Act.

The consent

Application was made in February 2001 for a subdivision with the lot boundary immediately behind the existing dwelling in order to provide a prime, dune top building site for the landward allotment. Only around 5 metres of the seaward allotment was outside the operative hazard zones (which, to exacerbate the situation, were manifestly out of date – as confirmed by the coastal hazard study findings released in draft within 18 months of the application).

The policies of the NZCPS were irrelevant to this application because the subdivision was a controlled activity and hence section 104 requirements did not apply.

The officer report, prepared by this reviewer, contained considerable discussion of whether the requirements of section 106 could be met. It was concluded that they could not be met, and a refusal of the consent was recommended.

The application was not notified, but was heard by Councillors.

The position of the applicant's planning representative was that the District Plan provided for subdivision as a controlled activity and included provisions to mitigate hazard risk. This was considered by the applicant's representative to satisfy the mitigation requirements of section 106.

The Hearing Committee of Councillors did not make a decision on the application after the hearing, but rather sought further information from the applicant on hazard risk.

The applicant subsequently withdrew the application in October 2001 and sold the property.

Since the consent application withdrawal

The coastal erosion study by the Council was commenced around the time of this consent application.

The 2003 draft recommendations for amended hazard lines in the Kapiti coastal erosion study include within the primary risk 'no build' zone almost all of the seaward lot that had been proposed in 2001.

The new owner of the property made a new application which shifted the lot boundaries landward so that the top of the dune was within the seaward lot. Nevertheless, because the coastal hazard zones have moved landward, the whole of the seaward lot was within the hazard zones, as updated and recommended in the draft strategy. The Council granted the consent.

Issues raised

The failure to update hazard zones led to a situation where a subdivision lot could be proposed as a controlled activity, and a dwelling constructed as a permitted activity, where both were entirely within an area subject to high hazard risk.

The absence of District Plan provisions to control subdivision, because of a reliance on section 106 of the Resource Management Act, precluded the NZCPS having any effect on coastal hazard management in this area which is very prone to coastal hazards. It ensures a limited scope and case-by-case approach that cannot take account of coastal hazard management planning fundamentals. Only the issue of whether there is likely to be material damage to the private property to be developed is relevant in making the decision on whether to allow the development to proceed.

Seven years after the NZCPS was gazetted, after the repeated advice of Dr Gibb, and after the preparation of an operative district plan under the Resource Management Act, the Kapiti Coast District Plan does not exercise any control over subdivision or multiple dwellings in an area that suffered damage less than 30 years ago and has a long-term trend of erosion (even without sea level rise).

As the *Henry* consent below demonstrates, a dwelling could have been built at the top of the 6 metre high erosion scarp (next to existing dwellings perched close to the edge of the scarp) as a permitted activity, provided only that it was of relocatable design. Subdivision could well have followed on the same basis as the *Henry* subdivision.

Background

The applicant owned a large property with a substantial area in the 50 metre wide coastal hazard zone comprising the ‘no-build’ and ‘relocatable’ zone. He wished to subdivide it and build a substantial family home on the seaward lot, extending into the ‘relocatable’ hazard zone.

This property is north of the Raumati seawall, in an area that has no continuous seawall, but has been suffering erosion since the mid-1990s (along with the whole shoreline up to the Waikanae River).

Half of the 20 metre ‘no-build’ immediate risk hazard zone was already eroded away at the time of the application.

The amount of erosion would likely have been greater but for renourishment of the beach opposite the Paraparamu Beach shopping centre in 1994 after substantial erosion there threatened the beach amenity and park facilities

The consents

The applicant first sought a subdivision consent. The officer report focused on the Resource Management Act section 106 issue of material damage, as the subdivision met all the controlled activity standards (as discussed in the case above).

This was a less clear cut case than the 111 Rosetta Road subdivision, in that there was a substantial area of land outside the (out-of-date) hazard zones in the District Plan. Around one third of the lot was in the hazard zones.

The recommendation was for refusal of the consent on the basis that there was a likelihood of the loss of a third of the land or more over time, and that such a loss of valuable residential property would represent material damage.

As with the above Rosetta Road consent, the applicants considered that their proposals for a no-build area, the District Plan rules requiring relocatable design, and planting of the foredune would be sufficient mitigation to meet section 106 requirements.

The Hearing Committee of Councillors declined the application.

The applicant appealed the refusal. At the same time, the applicant took advantage of the District Plan provisions to apply for a resource consent and building consent for a second dwelling on the property, being the family home he wished to build on the proposed new subdivision allotment.

The dwelling was a substantial two storey dwelling over 30 metres long with an estimated value for the building consent of \$500,000. It required consent only because of side yard encroachments, but had no different effects to a second permitted activity dwelling allowed as of right on the site by the District Plan rules. On the basis of the ‘permitted baseline’

approach (now made explicit in the Resource Management Amendment Act 2003), the Council granted consent for the dwelling.

With the dwelling already under construction, the applicant pursued the Environment Court appeal on the subdivision consent.

As with the Council consideration, the Environment Court had only section 106 to consider, and hence only the issue of material damage to the property to be subdivided.

The applicant submitted that even if the 50 metres of coastal hazard zone disappeared, there would still be a large residential property left.

The Council countered that there would be material damage from the physical *loss* of the land (and potentially structures) through coastal erosion, as well as substantially lower property value.

In its decision²¹, the Environment Court considered the evidence of erosion and the existence of the second dwelling already under construction, and was of the opinion that “any risk of damage to that building by erosion or inundation will not be increased or decreased by our decision on this application.”

The Environment Court concluded that the land was likely to be subject to material damage by erosion or inundation, but went on to conclude that the *effects* of any material damage by erosion or inundation will be avoided, remedied or mitigated by the no-building setback, the relocatable rules of the Plan, and by planting, and that: “As already noted, any effects on the dwelling being built are not altered by the subdivision consent.”

The Council’s refusal was overturned, and subdivision consent was granted.

Issues raised

Once a second dwelling is built, it appears on first consideration that subdivision makes little difference to the effects likely to occur, including damage to land from coastal hazards. The Courts, and other decision-makers, are inclined to see that the ‘horse has bolted’ and that subdivision is only the drawing of a line.

This perception represents a challenge to sustainable coastal hazard management, as there are real but subtle changes to the effects of coastal hazards in terms of increased risk and reduced response options. Creating two lots with two different owners means that the significance of any damage is likely to be greater than for one owner with one lot. Also, the options for response in the event of hazard threat will be reduced. The outcome is an increased percentage loss of land or property value; the ability of the property owner to relocate within the property is lost; and also lost is the ability of the property owner to, at least, retain one dwelling on the private property title if the seaward dwelling has to be relocated off the property.

It is to be noted that, with the 2003 amendment to section 106, which gives discretion to Councils to allow subdivision, there cannot be the same level of reliance on section 106 to

²¹ Henry v Kapiti Coast District Council, W24/2003.

prohibit unwise subdivision, and District Plans will have to exercise control of subdivision in hazard prone areas.

Masterton: Mataikona seawall – Greater Wellington Regional Council

Mataikona is on the Wairarapa coast, east of Masterton and immediately north of Castlepoint.

Where the road from Castlepoint passes the small settlement at the Okau stream mouth south of Mataikona, it runs alongside the shore and the stream mouth and was being affected by erosion from both the sea and the stream.

In 1999, an Opus report²² commissioned by Masterton District Council set out a comprehensive range of alternative options for this location with an analysis consistent with the coastal hazard related NZCPS policies.

The report recommended either beach nourishment (the most cost effective option), or a rock revetment supplemented with beach nourishment.

The consent

The resource consent application was prepared for Masterton District Council by the same consultants, Opus International Consultants²³.

The September 2000 application was for 300 metres of rock revetment.

Consideration of alternatives in the application is brief and then the focus moves to the measures proposed to mitigate the effects of the seawall construction.

In discussion of the NZCPS in the application, there is no reference to NZCPS Policy 3.4.6, which is the directly pertinent policy for seawalls protecting existing development. Nor is there any reference to any of the other Chapter 3.4 natural hazard policies.

The Wellington Regional Council officer report on the application also makes no reference to the NZCPS.

Despite the findings of the pre-application report, the officer report states: “Evaluation by the applicants has determined that there are no practical alternatives to the protection works that may be adopted at this location. In my view the proposal represents the efficient use of natural and physical resources in a remote locality.” Consent was granted.

Issues arising

Applications such as this, in remote locations and out of the public eye, provide an opportunity to assess what is uppermost in the minds of the parties.

Consultants preparing an application for a client in a concise and efficient (reasonable cost) manner, and council officers trying to meet expectations of low processing costs, can be

²² *Mataikona Coastal Protection*, 1999, Opus International Consultants.

²³ *Mataikona Coastal Protection: Resource Consent Application*, 2000, Opus International Consultants.

expected to give an indication in the documents they produce as to just what parts of the NZCPS are effective (ie seen as important, applicable and useful for a concise assessment).

If that is a valid rule of thumb in this case, then the coastal hazard related NZCPS policies have not achieved penetration into the framework of coastal hazard management in this region and were not effective as at late 2000.

On the face of it, this appears to be an example of the ‘implementation gap’, where practicable alternatives are more complex and outside the comfort zone of councils and residents, and a seawall is the straightforward and trusted choice giving immediate protection.

The new Wairarapa Coastal Strategy now in draft form represents a real interest in addressing coastal character issues broadly, and consequent district plan provisions and local action plans may well address some of these issues.

South Wairarapa: Te Kopi Boulder Beach – Greater Wellington Regional Council

Background

The road to Cape Palliser travels around high bluffs of soft mudstone which has little resistance to toe erosion and slumping. The coastline in the vicinity of Te Kopi village has been experiencing erosion for many years, probably as a result of littoral drift and a sediment supply deficit. Palliser Bay has a high energy wave environment.

The erosion problem achieved some prominence around 10 years ago, when a number of baches on the seaward side of the road were threatened with collapse into the sea and, despite a range of protection works by individual property owners (from tyres to concrete walls), the baches still fell into the sea one by one.

While treasured by their owners, these baches and dwellings were of the more modest traditional beach-bach type. By comparison, the loss of the road itself would mean the loss of the only road access to a substantial fishing operation at Ngawi, to farms, and to Cape Palliser which offers valuable public recreation opportunities.

The application for a boulder beach follows many years of seeking viable options to protect the road from the high energy wave environment or to find an alternative road access route.

The consent:

The application from South Wairarapa District Council to the then Wellington Region Council was received in September 2002, supported by an earlier and substantial Assessment of Environmental Effects prepared by Beca Carter Consultants²⁴.

The proposed boulder beach is akin to a seawall of large angular quarry rock laid down on the beach at a low angle (22 degrees) so as to dissipate wave energy.

²⁴ *Palliser Bay: Options for Continued Access*, October 2000, Beca Carter Hollings and Ferner Ltd.

The full proposal for one kilometre of boulder beach would involve 35,000 tonnes of armour rock laid on 22,000 tonnes of river metal.

In the Regional Council's officer report, the NZCPS is listed as a planning instrument to consider, and several 'structures' objectives and policies in the Regional Coastal Plan are referenced.

In the section devoted to alternative methods, the officer report refers to the whole volume of the Assessment of Environmental Effects report that is devoted to evaluating a range of options for retaining road access to Ngawi and Cape Palliser. It then states that:

The decision to proceed with the coastal protection works as being the best practical option, thereby satisfying Policy 3.4.6 of the New Zealand Coastal Policy Statement, was based upon an evaluation of many factors

Consent was granted under delegation (ie at consent officer level), for the 10-year period suggested by the Department of Conservation in its submission.

Issues arising

On the face of it, this is a more clear cut case, with fewer or no viable alternatives at present, compared with the Mataikona seawall case reviewed earlier.

In this case, NZCPS Policy 3.4.6 is cited, with confidence that the best practicable option requirement has been met. This is an interesting contrast to the Mataikona application and officer report two years earlier, where NZCPS Policy 3.4.6 would have been less easily satisfied, and was not cited. This tends to indicate that, as reported by council staff during consultations, the NZCPS policies are seen by applicants (and some council officers) as a hurdle to get around, including by ignoring the policies where possible.

3.4 Another case study – Wainui Beach seawalls

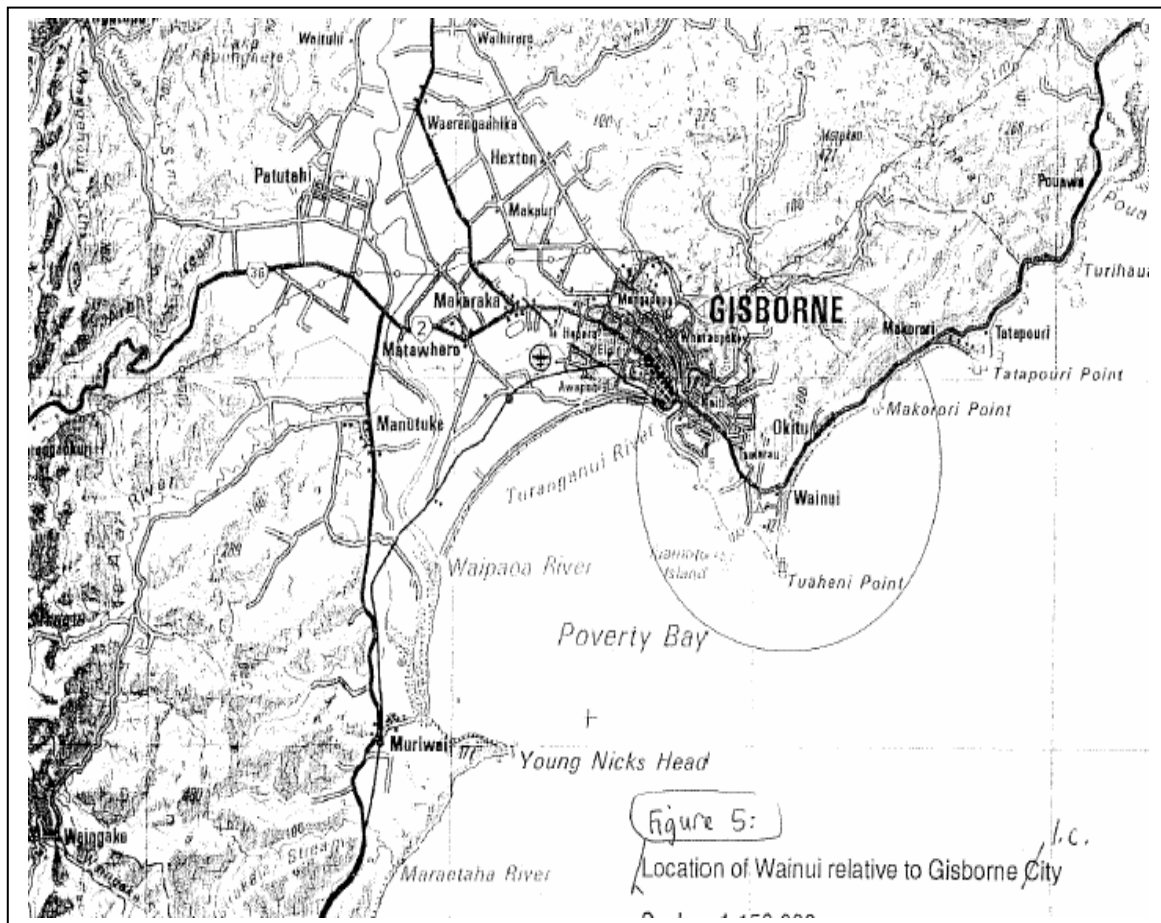


Figure 5: Location of Wainui relative to Gisborne city

3.4.1 Introduction

The unauthorised works, and proposals for consent, at Wainui Beach, just north of Gisborne city, have led to an aborted consent hearing by Commissioners, a Planning Tribunal declaration, a High Court judgment, a consent hearing by independent Commissioners, and a consent order from the Environment Court. Currently, the Gisborne District Council and Department of Conservation have sponsored the preparation of a Wainui Beach Management Strategy by a community committee, while the beachfront residents are pursuing a reference on the Gisborne Regional Coastal Environment Plan in the Environment Court.

It is a case where the Department of Conservation has championed the NZCPS coastal hazard policies and worked alongside the Gisborne District Council to seek a sustainable solution to the problem of coastal erosion of private property on the beachfront.²⁵

It is also a case that has illuminated many issues that arise from hard engineering works, where those hard engineering works seek to protect valuable beach front private property at a popular beach that is important to the wider community (including tangata whenua), and that is also subject to a high energy wave environment and a long-term trend of erosion.

Those issues involve human, financial, legal, legislative, and policy considerations.

This case therefore should be able to offer insights into both how effective the coastal hazard related NZCPS policies have been, and the issues that should be addressed in an amended NZCPS.

It is also a case that has cost residents and the wider community (through the Department of Conservation and Gisborne District Council budgets) some hundreds of thousands of dollars, and is worthy of a careful and thorough review.

This case study, in reviewing the consent process, also traverses the Gisborne Regional Policy Statement. It is noted that Gisborne District Council is a unitary authority.

3.4.2 Setting the scene

See Appendix 12 for more background to the Wainui Beach consent process.

Wainui Beach is a golden sand, pocket beach that is accessible to Gisborne city, and very popular with residents of the city and beyond. It is a beach with national and international importance as a surf beach.

It is also a beach that is very important to the local iwi, Ngati Oneone, being a taonga that was and is part of their connection to the coast, and to the sea and its resources.

It is also a residential settlement with highly valued beachfront properties.

²⁵It is noted that the reviewer assisted in the development of the Department of Conservation's case for the various hearings up to around five years ago. The focus of this review is on the Gisborne Regional Policy Statement, the Gisborne District Council Officer report, and the various decisions and judgments, rather than the DOC case.

Wainui Beach is subject to coastal erosion, coastal landslips, and tsunami.

Winter storms in 1992 led to severely lowered beach levels and heavy attack on existing protection works as well as erosion of the dune. The beachfront properties were threatened by ongoing wave attack over the depleted beach and damaged protection works.

This was the beginning of works first by the Council, and then by residents, to shore up the protection works by dumping substantial quantities of large rocks down the eroding dune face.

Thus began the process that continues to the present, 11 years later.

3.4.3 The consent process

See Appendix 12 for a more detailed analysis of the Wainui Beach consent process and Environment Court and High Court judgments.

The stages of the process are outlined below.

1992 – The beginning of the consent process

Unauthorised works carried out after the winter storms.

1993 – Applications for a restricted coastal activity

Application made for a coastal permit, then an application to the Planning Tribunal for a declaration as to whether a coastal permit was required.

1994 – Planning Tribunal declaration

The Tribunal found²⁶ that the works were outside the coastal marine area and hence were not a restricted coastal activity and did not require a coastal permit, but did require a land use consent.

The approach taken by the Planning Tribunal to the difficult issue of the Mean High Water Springs jurisdictional boundary was to look for a pragmatic and readily ascertainable boundary. The Tribunal chose the vertical front face of the existing gabion basket seawalls.

1995 – High Court appeal

The residents appealed the Tribunal's declaration. Their case was that there was a common law duty on the Crown to preserve the realm from the inroads of the sea by appropriate defences, and that people have a common law right to protect their properties.

²⁶ Falkner v Gisborne District Council and Minister of Conservation, A82/94.

In dismissing the appeal²⁷, the High Court confirmed that the proposed works were subject to the Resource Management Act (RMA) and hence resource consents were required.

However, Justice Barker did comment on the lack of any compensation provisions in the RMA, and expressed concern for the plight of the beachfront owners.

Justice Barker also commented that the futility of continuing the protective works, and their essentially temporary nature, had been signalled by the authorities even 20 years before.

1995–1996 – The land use applications

The officer report on the land use application made by residents to a Hearings Committee of independent Commissioners is a comprehensive document.

All of the coastal hazard related NZCPS policies are quoted in full, along with an interpretation of their application to the proposed works and their effects.

The approach of the NZCPS was supported by Regional Policy Statement provisions.

The officer report includes study information showing that a large proportion of property owners had purchased or developed their properties in identified coastal hazard zones or with encumbrances on the title.

Council concerns over building the seawalls on Council owned public reserves are also discussed in the officer report.

Kaitiakitanga was also addressed in the officer report and evidence prepared for the hearing. (The evidence of Mrs Searancke is contained in Appendix 12.)

The officer report assesses the position of the applicants, namely that the applicants:

- challenged the validity of evidence for and the reality of a trend of erosion;
- consider that the proposed works “are a low cost solution that can be readily applied in this environment with the certainty of success given an appropriate management regime;”
- contend that the proposed works will visually improve the beach by regulating and making uniform the existing structures;
- assert that NZCPS Policy 3.4.6 sanctions protection works for protection of existing development; and
- suggest that beach nourishment may be feasible, but dismiss managed retreat as not well founded and without a coherent strategy to achieve retreat.

Based on Dr Gibb’s conclusions that Wainui Beach is experiencing a slow long-term trend of erosion, the assessment in the officer report is that passive erosion will lead to long-term degradation or loss of the beach and increased attack on the protection works.

²⁷ Falkner v Gisborne District Council on appeal [1995] 3 NZLR 622.

The officer report cites the body of evidence produced by coastal experts Patterson, Gibb and Single, as well as the Council's own coastal engineer, Mr Peacock, to the effect that the protection works should be seen as:

- being temporary structures only;
- being in need of ongoing maintenance, repair and upgrading;
- not avoiding the potential for damage of property behind the structures; and
- having long-term adverse effects on the coastal environment.

A Kingett Mitchell & Associates socio-economic assessment which identified and valued three options for the future of Wainui Beach concluded that retreat was the preferred option, followed by the proposed protection works option.

The officer report concluded that the proposed works were not in accord with the best practicable option approach in NZCPS Policy 3.4.6 because they:

- do not promote the purpose of the Resource Management Act;
- do not accord with the objectives and policies of the various statutory policy statements and plans; and
- do not represent a sustainable use of natural and physical resources; and that:
- the proposed protection works are not sustainable in a physical sense, i.e. they will not perform the job expected of them by the residents.

(A copy of the Officer report conclusion is contained in Appendix 12.)

April 1998 – The decision of independent Commissioners

The Commissioners noted (as did the High Court earlier) that there was no compensation regime in New Zealand.

The Commissioners focused on proposals for protection works at the southern end of the beach, where there would be a lesser effect on the beach as a whole and where there is not opportunity for dwellings to retreat within their properties.

The evidence from Ngati Oneone was considered to be of significance in arguing against consent for the seawalls.

The Commissioners expressed the view that:

It was noted at the site visit that the vegetative cover of the 1992 rock revetment works had softened that appearance. With appropriate cover, rocks, notwithstanding they may not be of beach or local origin, would not appear to be unduly disruptive of the natural character of the beach.

(This again equates natural character with visual appearance, despite the extensive content of NZCPS Section 1).

In its consideration of the NZCPS, particular attention was paid to NZCPS Policy 3.4.6, and the Commissioners concluded that the applicant's design was inadequate to achieve effective protection from erosion, and also that the design did not promote sustainable management.

In the short-term, the Commissioners considered that the residents should be authorised to maintain the existing protection works at the southern end of the beach, and their decision provided for that short-term maintenance with a 5-year review, but otherwise declined the application.

June 1998 – Residents’ appeal against resource consent refusal

The residents appealed to the Environment Court, and the appeal was sent to mediation.

2000 – Residents’ reference against the Proposed Gisborne Regional Coastal Environment Plan

Concurrent with the mediation, the residents lodged references containing a number of general assertions leading to a conclusion that the Proposed Gisborne Regional Coastal Environment Plan is “a plan which is irrational and unreasonable.”

April 2002 – Consent Order for appeal against resource consent refusal

Four years after the appeal was first lodged, a consent order was agreed between the parties, which:

- allowed all existing protection works to remain, on a maintenance only basis;
- required a review by May 2003 with progress on finding a longer term solution; and
- formed a working party “to identify an acceptable long-term solution to the problem of erosion at Wainui Beach”.

2003 – Strike out motion on reference against the Proposed Gisborne Regional Coastal Environment Plan

A judicial conference was held on 28 May 2003, where Gisborne District Council sought an adjournment to bring both the resource consent condition review and the reference together for consideration in early 2004.

2002–2004 – Wainui Beach Draft Management Strategy

Also concurrent with the reference on the Regional Coastal Environment Plan has been the preparation of a Wainui Beach Draft Management Strategy (Draft Strategy).

This Draft Strategy arose out of the mediation over the resource consent appeal, and the setting up of the joint working party as one of the outcomes of that mediation.

The Draft Strategy records that: “Over the past three years, the bare land value of beach front property at Wainui Beach has more than doubled”.

The Draft Strategy Vision Statement is:

The protection and enhancement of Wainui Beach and adjoining reserves for the use and enjoyment of future generations.

As with other strategies covered in this review, this draft strategy is far more detailed and responsive to particular circumstances than District Plan policies and rules can or should be. Its scope is also broader than the Resource Management Act, extending to funding from special Local Government Act rating district funds, retiring and restoring farmland, and relocating dwellings (despite no encumbrances requiring relocation).

Preferred management options in the Draft Strategy include a new seawall at the southern end of the beach; and soft engineering options combined with the removal of existing works and retreat of dwellings within their properties now and over time further north along the beach.

Of note is the following in the Draft Strategy:

The Strategy Committee has considered the varied opinion on the effects of 'hard' property protection works such as a rock revetment north of Wainui Stream. Our conclusion is that there is just too much at stake in terms of the high amenity, tourism, surfing and recreation values to risk damage to the beach from hard protection works. Our recommendation is to trial modern management practice of 'soft' options ...

Those recommended soft options include the immediate retreat of three Pare Street dwellings from the front of the high foredune. It is noted in the Draft Strategy that two neighbouring property owners in Pare Street have already relocated their dwellings at their own initiative. One of those dwellings now has a setback of 40 metres, which has been estimated in the past by Dr Gibb to give a 100-year protection from coastal erosion hazard.

2004? – Finalising the strategy

The Draft Strategy is in the process of being peer reviewed, and some resolution is hoped for by the time the Environment Court convenes in around March 2004 to hear the Regional Coastal Environment Plan references and the review of the consent conditions.

The strategy could then play an important role in progressing resolution of the conflict over property protection work proposals that have now been unresolved for 11 years.

As with all strategies, this strategy would have no status itself under the Resource Management Act, and would have to be implemented through RMA mechanisms such as resource consents and District Plan changes, as well as through non-RMA mechanisms such as community funding and community activities.

3.4.4 Issues arising

The issues arising from the Wainui Beach case are summarised as follows:

- The problem of determining the jurisdictional boundary of Mean High Water Springs, and the uncertainty created for consent procedures. Note that this issue is reinforced by a recent Environment Court case in Christchurch, where there was considerable confusion created by differing rules in the Christchurch City Plan and the Canterbury Regional Coastal Environment Plan for developments on coastal hazard prone land on South Brighton Spit²⁸.
- The confidence of residents in under-designed protection works, despite a long history of under-designed works failing.
- The perception of residents that under-designed works will provide protection and are a permanent solution to coastal erosion, even immediately after storms that have severely damaged the most recent protection works and eroded property.
- The reluctance of residents to accept the substantial design of, and to pay the cost for, protection works that will provide a moderate level of protection against open coast hazards.
- The reluctance of residents to consider retreat, even within their own properties, even where studies establish that it involves comparable financial cost to even moderate protection from hard engineered protection works, and larger overall benefits when wider cost/benefit issues are taken into account. Note that at least one Wainui Beach resident has relocated within their property.
- The difficulty of proving (or disproving) a trend of erosion, even with a data set that is one of the better data sets available in New Zealand.
- The reluctance of residents to accept that there is a trend of erosion.
- The difficulty for the Council in dealing with unauthorised works.
- The legal and legislative issues relating to building property protection works on public reserves.
- The difficulty of achieving any outcome, let alone a sustainable outcome, when property owners are determined to maintain the status quo of poorly designed protection works.
- The expectations of property owners that they are entitled to protect their properties without any statutory consent process to establish or protect the public interest in the public reserves and beaches affected.

²⁸ New Zealand Cashflow Control Ltd and Canterbury Regional Council v Christchurch City Council, C60/2003.

- The concern of the High Court and Hearing Commissioners that no compensation is available for property owners who are not able to protect their properties.
- In terms of NZCPS effectiveness and implementation, this consent process does not establish whether consent would have been refused to properly designed seawalls, notwithstanding their long-term effects on the beach and its values to the region.
- The tendency to equate visual effects of a seawall with the natural character effects of a seawall, notwithstanding the extensive range of values and effects covered in Section 1 of the NZCPS and the effects of ‘coastal squeeze’.
- The majority of property owners knew, or should have known, of the hazard risk when they purchased their properties or invested in developing their properties.
- The land values in the beachfront hazard zone have doubled in the last three years despite the well-established hazard zoning and the prominent and ongoing litigation over whether property protection works would be allowed.
- The role of the NZCPS (initially the Draft NZCPS) and the Department of Conservation in changing Gisborne District Council’s support for the status quo of under-designed seawalls, and perceptions concerning the appropriateness of seawalls.
- The substantial role of the NZCPS in the development of the Regional Policy Statement and the Regional Coastal Environment Plan.
- The substantial role of the NZCPS in the assessment of the proposed protection works.
- The role of the tangata whenua and surfers in advocating protection of the beach values.
- The preparation by Gisborne District Council and the community, after 10 years of litigation, of a Wainui Beach Draft Management Strategy that sets out specific actions which aim to reduce hazard risks for both the residents and the beach.
- The uncertainty still, after 12 years of litigation, over whether a finalised strategy will achieve the acceptance of residents and others, and thereby enable a resolution of the litigation, and progress towards sustainable coastal hazard management of Wainui Beach.

Case Studies: Non-statutory Strategies and Draft RMA Plan Provisions

The following documents were assessed as part of this review²⁹:

- draft ‘Wairarapa Coastal Strategy’;
- management responses recommended in the report: *Whakatane District Council – Coastal Hazard Analysis*;
- draft ‘Strategies for managing coastal erosion hazards on the Kapiti Coast’ and the recommended coastal hazard provisions for the Kapiti Coast District Plan; and
- draft provisions for the Tauranga District Plan

This section and Tables 4.1–4.5 are a summary of the consistency of these four non-statutory documents with the coastal hazard related NZCPS policies.

See Appendix 13 for more detailed analyses of these documents.

4.1 Setting the scene

The draft district plan and strategy initiatives reviewed here have importance as an indication of:

- how rapidly the discipline of coastal hazard management planning in New Zealand is evolving; and
- what direction that evolution is taking.

Just as with the operative plan provisions, these draft provisions are reviewed here to see what role the NZCPS coastal hazard policies are playing in this ongoing evolution of planning controls (and other methods). In particular, this can assist in gaining insights into how the NZCPS coastal hazard policies could be changed to guide the development of future policy statements and plans.

²⁹The Dahm peer review draws attention to the site specific strategies prepared for four sites in the Auckland region and referred to in Section 3.2.2 of this report:

- *Muriwai Coastal Hazard Management Strategy*, June 2002, Coastline Consultants Ltd
- *Coastal Hazards and Management: Hudson’s Beach*, Manukau Harbour, July 2001, Coastline Consultants Ltd
- *Browns Bay: Coastal Hazards and Management*, June 2002, Coastline Consultants Ltd
- *Onetangi Beach Coastal Hazard Management Strategy*, March 2002, Tonkin & Taylor Ltd.

No detailed assessment of these site specific strategies has been included in this review, but they stand on their own merits as important reference documents and good practice examples. They are available from the Department of Conservation as part of the archives for this review.

The Dahm peer review also draws attention to strategies and case studies undertaken by Environment Waikato that he considers more advanced than the strategies addressed in this report from the four study regions:

- *Regional overviews of coastal erosion and coastal flooding* (EW Technical Series Reports 1999/06 and 1999/07)
- *Regional management strategies for coastal erosion and coastal flooding* (EW Policy Series Reports 1999/03 and 1999/06)
- *Pilot study of coastal hazard management at Whiritoa Beach*, circa early 1990s, involving Hauraki District Council, iwi and the local community, and now implemented.

It is important to note that these provisions represent proposals before they are opened up to the wider community and political process that is involved in achieving a proposed statutory plan or an operative statutory plan under the Resource Management Act.

The Wairarapa, Whakatane, Kapiti and Tauranga initiatives are reviewed in that order, as they represent increasingly advanced stages of evolution into district plan provisions.

The consistency of these draft plan provisions and recommended strategy provisions with the coastal hazard related NZCPS policies are tabulated in Tables 4.1–4.5 in the same way as for the statutory policy statements and plans, in order to provide a ready comparison with the statutory documents.

4.2 Draft Wairarapa Coastal Strategy

See Appendix 13 for more detailed analysis of this document

The draft Wairarapa Coastal Strategy was released in mid- September 2003.

This strategy is a joint effort of the three district councils and Greater Wellington Regional Council, as well as Rangitaane o Wairarapa and Ngati Kahungunu ki Wairarapa.

It is clearly a document that, as well as involving a number of agencies and iwi in its inception and substantial community consultation in its preparation, is seeking to engage the whole coastal community.

As stated to the reviewer by Greater Wellington Regional Council staff, it also aims to take NZCPS policies and apply them as specifically as possible to the Wairarapa, so as to provide clear guidance for decision-making. Unspecific terms such as ‘inappropriate’ have been avoided.

The strategy revolves around identifying the special qualities of the Wairarapa coast that the community wishes to retain, understanding how development can impact on those qualities, and then providing for “sensitive, sustainable development of the Wairarapa coast which recognises and retains its special qualities”.

The issues addressed in the natural hazard section of the draft strategy include the lack of information, knowledge and specific guidance available for making decisions regarding hazard zones and the risk to land use and development. A technical report on natural hazards was commissioned as part of the preparation of the draft strategy³⁰.

In relation to land use and development, the strategy’s goal for natural hazards is to avoid development that increases the number of people and the amount of development that is at risk (and which thereby increases the pressure for protection works), so as to reduce the level of risk.

³⁰ *Wairarapa Coastal Strategy Technical Report: Hazards*, Nov 2002, Sam Barton, Wellington Regional Council.

However, the particular ways in which coastal hazards and protection works can impact on access, recreation, landscape and natural character are not specifically identified in the parts of the strategy devoted to these values.

There is no reference to concepts such as ‘coastal squeeze’ that can assist communities to understand how development in coastal hazard areas and consequent hard protection can degrade those special qualities identified for the Wairarapa coast.

The policies can be seen as substantially consistent with coastal hazard related NZCPS policies, but do not take them further to identify the specific potential adverse effects of coastal hazards and property protection works on the special qualities identified for the Wairarapa coast, as well as the people and property.

Parts of the draft strategy other than the natural hazard section tend to address natural hazards generally, rather than the effects of coastal hazards and coastal hazard responses specifically.

One specific and notable extension of NZCPS Policy 3.4.6 is to identify alternative locations for at risk infrastructure, and to buy this land in advance so that ‘retreat’ is available as a first option.

There is a specific policy to support landowners and establish care groups to improve stewardship of dunes etc, to allow for natural protection from coastal hazards (NZCPS Policy 3.4.3).

The strategy does not identify the rules that could be included in a future combined district plan to give effect to policies through the consent process and in consent conditions. That is left to work through with communities as part of community and area structure planning. Reference is made to a hierarchy of controls for subdivision and development, depending on the type of hazard and the most appropriate response for that hazard.

4.3 Management Responses recommended in the report *Whakatane District Council – Coastal Hazard Analysis*

See Appendix 13 for more detailed analysis of this document

The report *Whakatane District Council – Coastal Hazard Analysis, November 2002* was prepared by Tonkin & Taylor Ltd. It is important to recognise that Tonkin & Taylor were primarily undertaking a coastal hazard analysis, rather than reporting to the Council on detailed sustainable coastal hazard management provisions.

The coastal hazard zones identified in the report were determined in accordance with the guidance in the Bay of Plenty Regional Coastal Environment Plan. They would give effect to NZCPS Policy 3.4.1 and NZCPS Policy 3.4.2.

The report promotes a long-term risk-based approach not covered in the NZCPS.

The detailed management approaches suggested under the headings of ‘Planned Retreat’, ‘Adaptation (Accommodation)’ and ‘Protection’ would give only partial effect to the coastal hazard related NZCPS policies.

Interestingly, the ‘Planned Retreat’ chapter includes many of the usual restrictions on development in hazard zones, such as no subdivision and no new dwellings, that would not normally be thought of as ‘planned retreat’ or ‘managed retreat’.

Such controls can, over time, if focused on risk reduction and strictly enforced, lead to development density decreasing and the development concentration moving away from the shoreline.

One ‘planned retreat’ method is for “all new private development to be designed to be readily and demonstrably relocatable...”.

Discussion of adaptation methods includes a reference to a government backed insurance scheme in the United States of America on the basis of communities agreeing to enforce floodplain management regulations in identified hazard areas.

Adaptation methods involving re-development guidelines, hazard covenants, awareness raising and monitoring of hazards are recommended.

Recommended protection methods focus on dune restoration with the assistance of community-based coast care groups, in accord with NZCPS Policy 3.4.3.

The report considers that an absence of coastal hazard zones places an extensive cost burden on each individual developer, as well as providing potential for inconsistent assessments. Continuing without coastal hazard zones was seen as not providing the best option either for sustainable coastal management or for treatment of coastal hazards.

4.4 Draft Kapiti Coastal Erosion Strategy and recommended coastal hazard provisions for the Kapiti Coast District Plan

See Appendix 13 for more detailed analysis of this document.

The May 2003 draft *Strategies for Managing Coastal Erosion Hazards on the Kapiti Coast* is the result of a substantial data gathering, hazard analysis and hazard planning exercise, with recommendations for District Plan changes as an explicit output.

The ‘Hazard Management’ part of the draft strategy sets out options carefully and comprehensively in a way fully in accord with the coastal hazard related NZCPS Policies.

The ‘Analytical Approach’ part of the draft strategy includes a set of guiding principles as part of the process for choosing the response methods to be recommended for the different sections of the Kapiti Coast with their different hazards and circumstances. These do not closely relate to the NZCPS general principles or policies.

The recommended strategic framework in the draft strategy is generally closely aligned to the approach promoted by the NZCPS. Notably, however, seawalls are seen as a method of protecting public beaches.

The recommended actions give the sense of continuing with an adjusted status quo, rather than setting new strategic directions in accord with the coastal hazard related NZCPS policies.

There are no future scenarios set out to indicate likely outcomes of the proposed strategies in a way that would be easily comprehended by the community.

The recommended new Kapiti Coast District Plan coastal hazard provisions give only partial effect to the coastal hazard related NZCPS policies.

4.5 Draft provisions for the Tauranga District Plan

See Appendix 13 for more detailed analysis of this document.

The draft proposals being prepared to resolve the *Skinner* reference (see Section 3.1.2) represent a dramatic evolution of policies and methods in the proposed Tauranga District Plan, and of the implementation of NZCPS policies at a district level in New Zealand. These have yet to be considered by the parties, the Environment Court or the community. At the time of writing, a modified draft set of provisions has been forwarded to the Environment Court and the other parties to the proposed District Plan reference.

As described by the District Planner, the August 2002 version of the draft provisions reviewed here includes policies which are specific and directive.

The draft provisions clearly set out what development is appropriate in the coastal hazard areas in Tauranga district, rather than leaving that determination largely to the consent process.

Many specific new coastal hazard policies have been added and there is further explanation of these policies.

If these draft August 2002 provisions were to become operative in their present form, they would represent a very clear interpretation and strong implementation of NZCPS policies to coastal hazards at a district level, in these ways:

- There are clear and definite restrictions or prohibitions on subdivision and more intensive development of property that is subject to hazard, but there is also greater certainty for all parties, and avoidance of costly hazard assessment, hearing and litigation costs.
- There is an explicit condition on development anywhere in the coastal hazard area. Such development: can only be seen as temporary (limited duration consents); will have to be moved if it does become threatened by immediate hazard; and protection works are not an available alternative option to relocation.

- There is a commitment (in line with the RCEP) to reduce the net risk to coastal hazards over time, rather than allowing risk to increase with increased hazard and increased development (risk = probability of damage x consequence of damage/value of assets damaged). This will ultimately benefit both property owners and the coastline environment.

As indicated in Tables 4.1–4.5, these provisions would be consistent with, and would also apply to Tauranga district in a specific way, almost all the coastal hazard related NZCPS policies.

5. Consultation Outcomes

5.1 Introduction

The consultation for the full review of the NZCPS included:

- a series of workshops run by the Department of Conservation with local government staff on the effectiveness of the NZCPS³¹;
- discussions with local authority planning staff in the case study regions about the coastal hazard provisions in plans and the treatment of coastal hazards in consent processes.

This reviewer also had:

- consultation by Dr Rosier with a range of agencies, business groups and community groups; and
- written submissions to Dr Rosier on the review of the NZCPS.

The following is a summary of the views and suggestions in relation to coastal hazard related NZCPS policies from each of those consultations.

5.2 Local government staff workshops

The Department of Conservation report (Young 2002) summary records that local government staff considered the coastal hazard policies were “largely ineffective and needed to be strengthened. Policies needed to be updated in order to incorporate the concept of ‘risk’ and new information on hazards, including figures on sea level rise.”

The management of, and information about, coastal hazards was seen as having changed considerably since 1994.

A clear statement that sea level rise is occurring was sought, along with guidance on how to implement management responses, including managed retreat.

Councils were under pressure from coastal communities to protect property and infrastructure. While councils acknowledged the need to adopt a policy of managed retreat in some locations, the following factors have prevented Councils implementing the policies in their plans that advocate managed retreat:

- high cost of compensation;
- low perceived risk of hazards among coastal communities; and
- property owner preference for hard protection works.

The issue of central government funding for managed retreat was raised.

More direction was sought in the NZCPS to prohibit development in high risk areas, and more enforcement by the Department of Conservation to prevent such development occurring: “Coastal developers see Chapter 3 of the NZCPS as a hurdle to get around.”

³¹*Monitoring the Effectiveness of the New Zealand Coastal Policy Statement: Views of Local Government, November 2002, Denise Young, Department of Conservation*

There was concern over the poor integration of coastal hazard management between regional and district councils. The limitations of regional coastal plans in managing hazards above Mean High Water Springs was raised.

5.3 Discussions in the case study regions

The discussions with local authority staff in the case study regions covered the case studies reviewed in this report as well as more general issues.

Many of the issues raised are canvassed in the analysis of the case studies. Some common themes to emerge were:

- Difficulties with implementation were seen as a greater barrier than any shortcomings in the body of coastal hazard policies.
- Cost was a very important barrier to achieving sustainable outcomes, especially short-term costs, regardless of longer term sustainability and benefits.
- Resources of councils, and costs to councils, were a barrier across a wide range of functions, from consent assessment to litigation over coastal hazard zones.
- The Department of Conservation did not play a significant role in championing the NZCPS. A champion was necessary to improve implementation.
- A vision and the concept of risk, needed to be introduced into the NZCPS.
- The pressures for coastal development were enormous, and councillors were reluctant to be a barrier to development (for a number of reasons that were beyond the scope of this review to explore). There was a tendency to ‘pass the buck’ and grant consent so that the regional council or the Courts were the authority that refused consent.
- The NZCPS needed to specifically and comprehensively provide guidance on the most difficult issue: existing development that is subject to coastal hazards. Infill development needed to be addressed specifically.
- There was confusion over natural character. Natural character was often perceived as having been already lost where there were existing seawalls. Conversely, proposed seawalls were often assessed as having little or no adverse effect on natural character.
- There were few or no lobby groups focused on coastline protection (to counter the development lobby), and little widespread public recognition of the finiteness of beaches and other public coastline assets.
- Property owners and communities did not perceive a high level of risk from coastal hazards.
- Property values on the coast, including in identified and publicised coastal hazard zones, were skyrocketing, along with the pressure for development.
- Property owners were very resistant to the imposition of coastal hazard zones and alternatives to hard protection works.

5.4 Dr Rosier consultation with a range of agencies, business groups and community groups

Dr Rosier reported (pers comm October 2003) that coastal hazards were not a prominent issue raised in the discussions with the many groups consulted.

Over and above the matters raised in the written submissions (see following section) there was one notable concern over coastal hazards from those with interests in land development.

Developers were very keen to gain certainty from the planning regime over their ability to develop coastal land. They did not wish to purchase land and then be unable to develop it because of coastal hazard restrictions that they were unaware of, or that were unclear, at the time of purchase.

5.5 Written submissions to Dr Rosier

The coastal hazard issues raised in the written submissions on the full review of the NZCPS mainly fall into five categories:

- Integration across MHWS
- Seawalls and a hierarchy of response options
- Climate change
- National leadership and guidance
- NZCPS ineffectiveness.

Other issues raised included a concern over loss of future access as a result of coastal erosion, the liability issues surrounding existing development in coastal hazard zones, and the advantages of ‘development setbacks’ over ‘coastal hazard zones’.

The following quotes give a flavour of the range of submitters’ views on these issues.

5.5.1 Integration across Mean High Water Springs

Improve guidance for integration between regions and districts in coastal management especially in regard to hazards. (Environment Bay of Plenty)

The NZCPS should provide greater encouragement for the use of integrative mechanisms such as coastal environment plans. (Environmental Defence Society)

Procedures should be in place to enable greater opportunity for cross-jurisdictional decision-making. (Beca Planning)

5.5.2 Seawalls and a hierarchy of responses

A hierarchy of tools for managing natural hazards would be useful in the NZCPS. Again, there is a large issue with funding the implementation of policies associated with natural hazards in NZCPS Chapter 3.4 and any assistance would be welcome. (Auckland Regional Council)

A scale of priorities and a hierarchy of response options should be provided with natural defence based solutions at the top, down to hard structural responses as least preferred. (Beca Planning)

Under NZCPS Policy 3.4.6, no applications for seawalls have been declined in the Taranaki region since the NZCPS became operative. Since this time, community pressures have led to the development of a number of seawalls in the Taranaki region. (Taranaki Regional Council)

Protection of existing development by best practicable option is outlined in Policy 3.4.6. However, the best practicable option statement needs to be more clearly defined or evaluation criteria supplied if relocation or abandonment are serious options. ...there are a number of difficulties in implementing a policy of managed retreat... (Environment Bay of Plenty)

One of the areas that still annoys me is land protection works and the loss of public beaches. Individuals get the benefit while the community loses the beach. ... I think the NZCPS needs very clear direction in what matters to take into account in [identifying] hazard areas. (Ken Murray)

Re-development and enhanced development should be prohibited within an identified coastal hazard zone, unless the affected landowners concomitantly commit to a long-term strategy of beach nourishment along with structures to hold the sediment on the beach, at the landowner's expense.

Construction of protective seawalls to protect property must be accompanied by the requirement of undertaking and maintaining beach nourishment to maintain the amenity values of the beach. Such costs rightly fall upon the front row property owners. (Terry Healy)

5.5.3 Climate change

...there is enough evidence that sea level rise is occurring. ... The NZCPS needs to provide direction about ... which sea level rise scenario should be used [and] ... suitable planning horizons. (Environment Bay of Plenty)

... the set of policies on natural hazards is still considered highly relevant to the coastal environment if not more so given the predicted impacts of climate change for sea level rise, storm surge, inundation and erosion. The existing policies ... which refer to the value of natural features as barriers to natural hazards and the need to enable these features to migrate inland are strongly supported. ... [The NZCPS] must provide a clear direction regarding whether there is a national policy to eliminate, manage, mitigate, or allow the loss of existing beaches and land to sea water rises... (Bay of Plenty Conservation Board)

Ports of Auckland considers that in respect of sea level rise there is an overstatement of risk. ... Any rise would be relatively gradual and in the meantime coastal development such as wharves, ramps and breakwaters are all designed and built with reasonable clearances above MWHs... (Russell McVeagh Solicitors)

5.5.4 National leadership and guidance

Sea level rise and coastal erosion are issues faced in every region of New Zealand, yet there is minimal national guidance on how to implement management responses to these hazards. ...

... Managed retreat is seen as unfair and unreasonable because land is lost which may not be compensated for.

Using a national approach to coastal hazard response implementation, involving the concept of risk, would generate greater consistency in the types of responses implemented ... around New Zealand. This approach would remove some of the unfairness and unreasonableness felt by those people affected by coastal hazards. (Otago Regional Council)

The risks [of natural hazards] are very high and urgently require well co-ordinated and effective national leadership to address and deal with short and long-term natural hazard issues. (Otago Regional Council)

Ultimately the NZCPS needs to provide strong direction prohibiting development in areas where there is high risk of coastal hazards, especially in areas that are facing development pressure. ... Policies need to...provide guidance towards a long-term outcome. Presently there is no commitment by the Minister of Conservation to guide or prevent such development. (Environment Bay of Plenty)

5.5.5 NZCPS ineffectiveness

The natural hazard policies in Chapter 3 are at risk of being considered to be generally ineffective. ... the NZCPS needs to incorporate the concept of 'risk'. (Beca Planning)

Policy 3.4.2 [protecting natural defences] seems to have been generally ignored. Examples include levelling of sand dunes ... and mangrove removal (Forest & Bird, Christchurch)

We consider that NZCPS Policy 3.4.1 should be amended to refer to identification of areas where hazards are 'likely'. Hazardous areas can often not be defined with the accuracy necessary for inclusion on District Plan maps but a general area of concern can be described. (North Shore City)

5.5.6 Other issues

Erosion in coastal areas and the effects of climate change were raised by members. Shoreline erosion impacts on access by changing the relative positions of the actual shoreline and the Queen's Chain or esplanade reserve that has been designated [...there is a concern to protect access for future generations] (National Council of Women of New Zealand)

The management of hazards is problematic in areas of existing development. ... There are liability issues with regard to high value coastal property and extra guidance may be required on existing use rights and liability (Environment Bay of Plenty)

Development 'setback' as a concept, is subtly more general than a coastal hazard zone in that it relates to providing a buffer zone between the beach and developments. ...establishment of setback may include considerations other than coastal hazard, for example, preservation of natural character...or protection of sites of special, ecological, or cultural interest. (Terry Healy)³²

³²Submission accompanied by paper Healy, Terry 2002 *Enhancing coastal function by sensible setback for open duned coasts*.

6. Assessing NZCPS Effectiveness

6.1 Introduction

This section discusses the effectiveness of the NZCPS in promoting sustainable coastal hazard management, based on the preceding case studies, the outcomes of consultation, and the author's experience.

The NZCPS is expected to achieve the following:

- integrated management in the coastal environment;
- translation into statutory policies and plans;
- influencing resource consent decision-making; and
- overall contribution to the achievement of sustainable management in the coastal environment.

This list of expectations is based on:

- the statutory requirements of an NZCPS defined in the RMA s57 and 58;
- the degree to which regional policy statements, and regional and district plans, must be consistent with an NZCPS in accordance with the RMA s62(2), s67(2) and s75(2)³³; and
- the s104(1) requirement to consider the NZCPS in resource consent decision-making.

At the same time, the difficulty in forming a definitive view on the effect of the NZCPS policies is acknowledged as follows:

- Where plan provisions and decisions appear consistent with coastal hazard related NZCPS policies, it can be difficult to discern whether the NZCPS has led the way or whether it has just followed behind the developing discipline of coastal hazard management in New Zealand.
- Conversely, where plan provisions and decisions appear inconsistent with coastal hazard related NZCPS policies, it can be difficult to discern whether the apparent inconsistency reflects particular local circumstances, and as such is an appropriate application of the principle of 'every case on its merits' (see Appendix 5).
- Elements crucial to successfully promoting (and implementing) sustainable coastal hazard management are outside the scope of the coastal hazard related NZCPS policies. This creates difficulties with accountability for the role of the NZCPS in achieving sustainable coastal hazard management.

The NZCPS is just one influence on ultimate coastal hazard management outcomes in New Zealand in the resource management and local government framework that determines processes and guides decisions on coastal management. The following diagram (see Figure 6) only begins to give an indication of the influences and inter-relationships that ultimately determine coastal hazard management outcomes in New Zealand.

³³The policy statements and plans reviewed were prepared under the RMA requirement that policy statements and plans "shall not be inconsistent with" the NZCPS. The RMA Amendment Act 2003 has strengthened the effect of the NZCPS on subordinate planning instruments to "shall give effect to" and this will have to be taken into account in determining the form of future NZCPS policies.

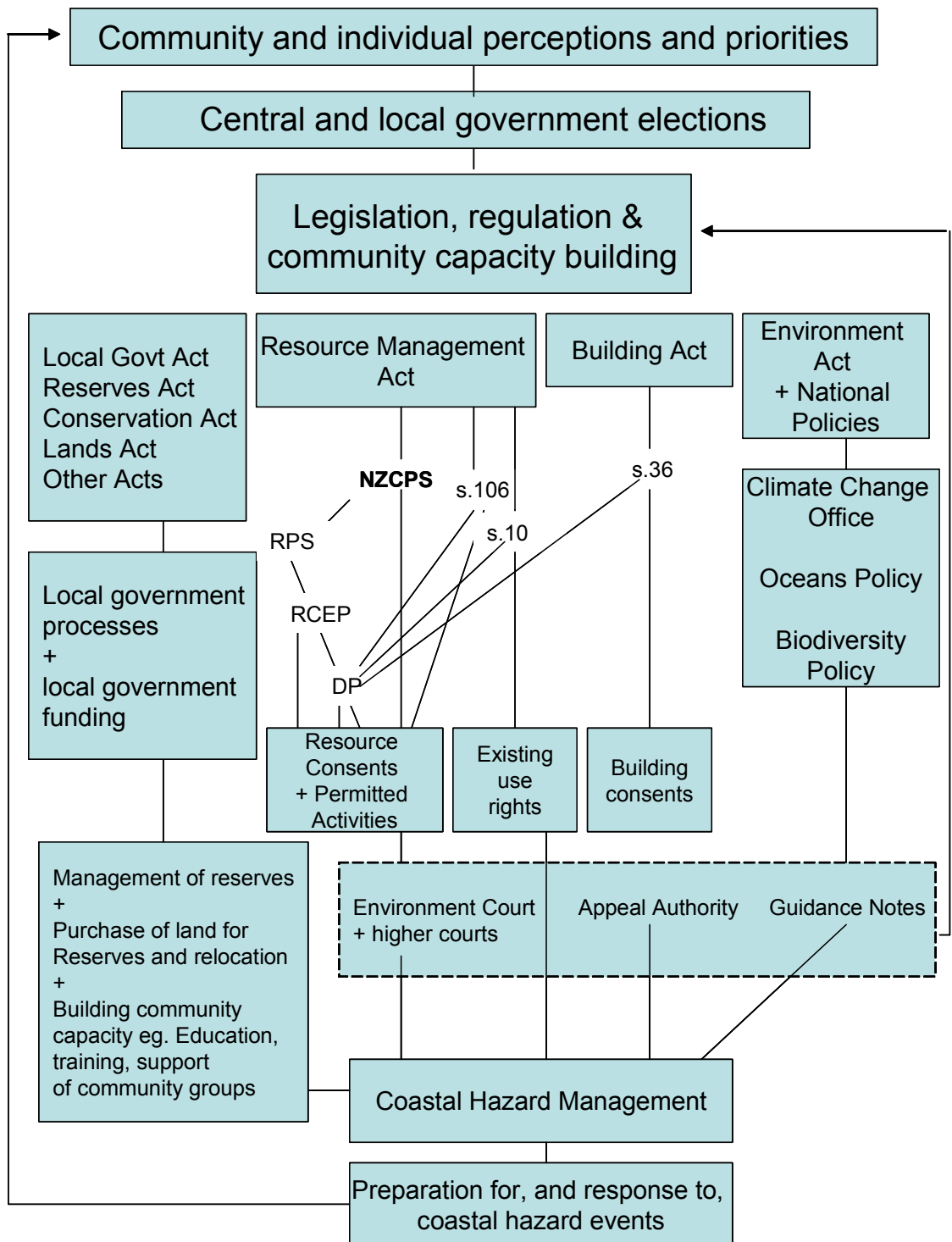


Figure 6: Influences and inter-relationships that determine coastal hazard management outcomes

The analysis that follows is therefore necessarily a qualitative summary of a number of insights into the role of the NZCPS in influencing plans, decisions and overall coastal hazard management outcomes. It cannot be a quantitative determination.

It is also noted that no matter how effectively the coastal hazard related NZCPS policies promote sustainable coastal hazard management in New Zealand, it cannot overnight solve all the coastal hazard problems already well established through a combination of past lack of knowledge and poor decisions. Nor can it address alone all the problems that will manifest in the future from the ongoing existing use rights and expectations of property owners in areas subject to coastal hazards, given that those rights existed in 1994 and they still exist now.

Therefore, this review has considered the question: “What role have the coastal hazard related NZCPS policies played in moving New Zealand towards management that will deliver a sustainable response to coastal hazards over time.”

This section assesses the effectiveness of the coastal hazard related NZCPS policies in that respect up to the present.

The next section looks ahead to consider the role that the coastal hazard related NZCPS policies could and should play in the future, and how effectiveness could be improved.

6.2 Effectiveness to date

The review results for effectiveness to date are described under these headings:

- integrated management;
- recognition in statutory planning documents;
- influence on consent applications preparation, officer reports, and consent decisions;
- coastal hazard areas with existing development – redevelopment, infill development and property protection works;
- greenfield development;
- certainty;
- vision for unsustainable coastal hazard management; and
- changing perceptions.

6.2.1 Integrated management

- *Ineffective* in establishing an integrated coastal hazard management regime across MHWS in the Wellington region where there has not been a Regional Coastal Environment Plan.³⁴
- *Ineffective* in meshing district plan and regional plan provisions across MHWS for coastal hazard responses, in order to achieve ‘seamless’ control of activities across the dynamic boundary.

³⁴As highlighted by the Rennie peer review, only one region with a regional coastal plan was included in the case study regions. The Dahm peer review also considers that a regional council should be able to include provisions in its Regional Policy Statement to achieve integrated management.

6.2.2 Recognition in statutory documents

- *Ineffective* in establishing sustainable coastal hazard management provisions with clear explanations in the Regional Policy Statement for the Wellington region (where there is not a Regional Coastal Environment Plan).
- *Effective* in establishing general hazard management objectives and policies in the Auckland and Bay of Plenty Regional Policy Statements that provide a mandate for the specific coastal hazard management provisions in the Regional Coastal Environment Plans of those regions.
- *Effective* in establishing sustainable coastal hazard management provisions with clear explanations in the Auckland and Bay of Plenty Regional Coastal Environment Plans.
- *Only modestly effective* in establishing many sustainable coastal hazard management provisions with clear explanations in operative district plans, but **more effective** in influencing the development of the next generation of district plans.
- *Only modestly effective* in achieving the identification of coastal hazard zones in those districts with coastal hazard prone land that did not already have coastal hazard zones in 1994.

6.2.3 Influence on consent applications, officer reports, and consent decisions

- *Largely ineffective* in influencing the assessments and applications prepared by development professionals such as surveyors, planners and solicitors (NZCPS policies often ‘a hurdle to get around’).
- *Effective* in providing a framework and mandate for coastal hazard management professionals and council planners to provide advice on sustainable coastal hazard management, but more guidance required; *less effective* with smaller projects.
- *Largely ineffective* in achieving understanding and acceptance of sustainable coastal hazard management by many elected councillors.
- *Effective* in providing some guidance for the considerations and decisions of the Environment Court (guidance missing in some key areas such as coastal hazard analysis, risk reduction, and implementing practicable alternatives to hard property protection works).

6.2.4 Coastal hazard areas with existing development – re-development, infill development and property protection works

- *Ineffective* in slowing down unsustainable development in coastal hazard areas where district plans have failed to identify coastal hazard zones.

- *Modestly effective* in slowing down (but not stopping) unsustainable development in high risk hazard areas (in terms of District Plan provisions and resource consent decisions, and influencing the decisions of property owners not to pursue development proposals).
- *Largely ineffective* in achieving sustainable management in low to medium risk coastal hazard areas with existing development (in terms of district plan provisions and resource consent decisions, and influencing the decisions of property owners not to pursue development proposals).
- *Ineffective* in avoiding the continued use of hard property protection works that impact adversely on Queen’s Chain values (i.e. achieving less traditional coastal hazard responses such as managed retreat; or achieving the use of seawalls as a short-term component of a coherent long-term strategy, where the seawalls are also well designed and located sufficiently landward to avoid ‘coastal squeeze’ effects in the interim).
- *Largely ineffective* in promoting options that avoid adverse effects on the environment and enable communities to accept and live with natural coastal processes and changing shorelines.

6.2.5 Greenfield development

- *Effective* in achieving prudent development setbacks and/or coastal hazard buffers with good development controls in many of the larger new coastal greenfield subdivisions.

6.2.6 Certainty

- *Ineffective* in delivering certainty to developers or prospective purchasers as to whether they will be able to subdivide or develop properties that are, or may be, in areas subject to coastal hazards (except for large greenfield sites).

6.2.7 Vision for sustainable coastal hazard management

- *Ineffective* in providing a clear vision for sustainable coastal hazard management and desired outcomes in New Zealand.

6.2.8 Changing perceptions

- *Ineffective* in changing community perceptions of:
 - the reality of coastal hazards;
 - the reality of coastal hazard risks;
 - the level and duration of security from coastal hazards provided by seawalls;
 - the reality of adverse effects of seawalls on coastline values and natural features;
 - the merits, over the longer term, of coastal hazard responses other than seawalls, such as beach nourishment and managed retreat;

- the need for well designed (and often substantial and costly) seawalls, if seawalls are to be used
- the ‘duty’ of Councils to protect private property from coastal hazards when coastal hazards do become a reality, or when the latest under-designed seawall fails to protect the private property from even moderate hazard events
- the ‘duty’ of property owners to consider the protection of public asset values when selecting a hazard response.

6.3 Overview of effectiveness to date

Even keeping in mind the limitations of a statutory policy, these results listed above, on the face of it, make a poor report card. Nevertheless, this is not to say that the coastal hazard related NZCPS policies have been a failure or are irrelevant.

From a late start in the 1970s, coastal hazard management was always going to take some time to catch up with more established disciplines on dry land that embrace sustainable management policies and practices.

Compounding the disadvantage of the late start is the complexity and inherent dilemmas of sustainable coastal hazard management in a society which wishes to play along the coastline, and also to have permanent habitations on ephemeral coastline features such as spits and foredunes (see Section 1.3 of this report and Appendix 3).

In addition, the reality of statutory processes such as the preparation of plans under the ‘new’ RMA regime, is that they are time-consuming, with many disincentives of cost and further delay in introducing variations. 13 years of the RMA and 10 years of the NZCPS have only just seen the completion of the first generation of most regional and district plans. It should be no surprise that plans are far from settled and are still actively evolving as councils muster the resources to address deficiencies and incorporate new knowledge and guidance (eg from case law) by preparing substantive plan changes or second generation plans.

This review suggests that the NZCPS has provided a framework and mandate for those who have been the motivated and leading practitioners of coastal hazard management planning. Amongst such practitioners, there is a general view that the coastal hazard policies are good, or at least the underlying principles and intent are good. The concern is to see those policies expanded and extended to give more specific or explicit guidance – mirroring the trend already begun in the evolution of the subordinate plans themselves.

The perception is that the effectiveness of the NZCPS coastal hazard policies is threatened less by a flawed body of policies than by a lack of implementation of the policies at the district council level.

The draft coastal management strategies and draft coastal hazard plan provisions in preparation at the time of this review make it clear that the coastal hazard related NZCPS policies have not yet finished playing their role in the moving of New Zealand towards sustainable coastal hazard management.

The evolution of plan provisions towards more specific policies and some prohibited activity and non-complying activity rules, will improve implementation of the coastal hazard related NZCPS policies.

Ten years has apparently not been long enough for the coastal hazard related NZCPS policies to fully influence the current generation of statutory plans. The NZCPS is quite likely to have greater influence in the next generation of statutory plans. The timing and outcome of the current NZCPS review could significantly affect the development of these plans.

However, the increasing attention to, and uptake of, the coastal hazard related NZCPS policies has also led to increasing recognition of gaps in, and problems with, the NZCPS policies that will limit their ultimate effectiveness.

Equally, there is increasing recognition of gaps in, and problems with, the wider coastal management framework and governance in New Zealand.

Changes and additions to the coastal hazard related NZCPS policies are required, with an emphasis on assisting (or compelling) implementation. Implementation has proven more difficult than determining what should be done to achieve sustainable coastal hazard management.

It is important to acknowledge the wider framework of coastal management in New Zealand, if the coastal hazard related NZCPS policies are to stand a reasonable chance of being effective in the face of the substantial barriers to implementation.

The next section is focused on looking forward – improving the effectiveness of the coastal hazard related NZCPS policies, in the light of the issues for sustainable coastal hazard management in New Zealand that have been identified during this review.

7. Looking Forward

7.1 Introduction

The case studies, related reports³⁵, consultation and submissions that are part of this review have identified issues and barriers for NZCPS effectiveness in promoting sustainable coastal hazard management in New Zealand. They have also identified some responses that are available to improve effectiveness.

The role that the coastal hazard related NZCPS policies could and should play in future in the rapidly evolving field of coastal hazard management, and suggestions as to how to achieve that role, were often the focus of the people who have been consulted and who made submissions.

This section elaborates on some of the major issues, and available responses to those issues, that have been identified in this review. The issues are addressed under these headings:

- the need for a vision
- integration across MHWS
- avoiding confusion over ‘risk’
- identifying coastal hazard zones
- improving implementation
- creating more certainty
- coastal hazards in existing settlements
- coastal retreat and ‘coastal squeeze’
- other issues.

7.2 The need for a vision

The lack of a clear vision or desired outcomes for coastal hazard management in the NZCPS policies was often noted.

A common view was that to provide national leadership and guidance in promoting sustainable coastal hazard management outcomes around New Zealand, the NZCPS will need to include a vision, and articulate that vision in clear provisions and explanations.

The word ‘provisions’ is used advisedly, as the Board of Inquiry which recommended the current NZCPS in 1994 took the view that only policies could be included in the NZCPS. Even the inclusion of general principles was seen as contentious and was tightly constrained.³⁶

Therefore, the first barrier to promoting a vision that can be used to send a clear message about the sustainable coastal hazard management outcomes sought in New Zealand, is whether such a ‘vision’ or ‘objective’ may be included in the NZCPS.

³⁵Notably *Issues, Barriers and Solutions: Environment Bay of Plenty coastal hazards case study*, 2003, Chapman and the Climate Change Office’s *Coastal Hazards and Climate Change – A Guidance Note for Local Government in New Zealand*, August 2003, draft, that the Chapman case study was contributing to.

³⁶“Report and Recommendation of the Board of Inquiry into the NZCPS”, page 7

While a vision or objective for coastal hazard management in New Zealand could be defined elsewhere, it is difficult to identify a more suitable place than a national policy statement. The sustainable management purpose and principles set out in Part II of the RMA was not seen by those consulted as sufficient in the way of a vision for the particular challenges of coastal hazard management.

The legislative barrier to a vision statement in the NZCPS, if it exists, would equally apply to the inclusion of explanations. Explanations would help with consistent interpretation of policies. Explanations would also promote public awareness and understanding of sustainable coastal hazard management principles and methods, and their importance in achieving sustainable management of New Zealand's coastlines.³⁷

A vision plus explanations would make explicit what is currently only implicit and uncertain in the present NZCPS policies on coastal hazards.

7.2.1 What should the vision be?

The vision clearly needs to be one that furthers the RMA vision of sustainable management of natural and physical resources in the coastal environment.

A reduction in coastal hazard risk (or no net increase) has emerged as an objective favoured by some council staff and in the Environment Bay of Plenty Regional Coastal Environment Plan.

The Environment Bay of Plenty Regional Coastal Environment Plan objective appears to refer to risk to property assets only, and has two components:

- to avoid the creation of coastal hazard risk for new greenfield development by avoiding the interaction between coastal processes and property assets in the first place; and
- to control new development in already developed coastal hazard areas so that there is no intensification of development.

However, even if there is no net increase in the value of assets in areas currently subject to coastal hazards, there will be increased risk in future as a result of climate change (and trends of erosion from other sources), because of increased likelihood of damage and additional assets from the wider area coming under threat.³⁸

Therefore a vision should seek:

- to actively reduce the total value of assets in areas that are subject to coastal hazards and/or make provision for assured removal of assets (so that the built assets at least are not subject to coastal hazards).

³⁷The "Commentary of the New Zealand Coastal Policy Statement 1994" prepared by two of the members of the Board of Inquiry provides some comment on the coastal hazard and other related policies, but they do not address the sustainable coastal hazard management issues raised in Appendix 3 of this review nor do they elaborate on the vision for coastal hazard management (there is a curious reference to a 10 year planning horizon: "The NZCPS is expected to deal with a 10 year time period.")

³⁸Climate Change and Coastal Hazards Guidance Note, Section 4.

A reduction in the total value of assets in coastal areas, including private assets, will reduce adverse impacts on the social, economic, and cultural wellbeing of property owners and communities in the future.

However, even if there is no increase in the coastal hazard risk to property assets, there will still be many communities and assets that remain subject to coastal hazard risk and hence there will still be a strong demand for property protection works.

Those property protection works may, in the future, with climate change, have a devastating effect on the narrow strip of land and foreshore that has a special place in the lives of most New Zealanders, and in which New Zealanders have a special interest that should be recognised and provided for.

The protection of the natural character of the coastline and the maintenance and enhancement of public access are already identified in Part II of the Resource Management Act as matters of national importance that “shall be recognised and provided for,” and a vision for coastal hazard management needs to give effect to that in relation to the management of coastal hazards.

Therefore, a vision would need to include another aspect that addressed the protection of public assets, along the lines of:

- to protect the natural functioning of coastal processes from the effects of property protection works so as to maintain coastal habitats, coastal ecosystems, and dynamic natural features such as dunes and beaches (and the natural character, public access, public recreational values, landscape values, and amenity values they provide); and
- to restore and rehabilitate the coastline over time from the effects of shoreline development and property protection works, so that the coastline can accommodate shoreline changes from dynamic coastal protection while still meeting the needs of an increasing population and increasing demand for public access and recreation along the coastline.

A vision for coastal management along these lines has been suggested by Jim Dahm (Dahm peer review, 2004):

To manage coastal hazards in a manner that will ultimately enable coastal communities to live with natural coastal processes and change, avoiding the need for human intervention with these natural processes, while also maintaining or enhancing important coastal values (natural, amenity and cultural) and natural coastline features.

In summary, a reduction in risk³⁹, along with avoiding and remedying the adverse effects of coastal hazard responses, would have long-term benefits for both:

- private landowners in terms of economic, social and cultural wellbeing, and quality of environment;

³⁹Involving a combination of probability of a hazard event, vulnerability of assets to damage, and consequence of damage to assets.

- and the wider community in terms of access to and enjoyment of coastal treasures, maintaining cultural connection with the coast, avoiding community conflict, and reducing the financial costs from hazard protection, damage to infrastructure, emergency response, hazard protection consent litigation, and civil liability litigation.

7.3 Integration across MHWS

Achieving better integration across the MHWS boundary was a common concern identified during the review.

Several regional councils have chosen to prepare regional coastal environment plans, and the case studies have indicated to the reviewer the advantages of regional coastal environment plans over regional coastal plans where there are coastal hazard issues to deal with in a region.⁴⁰

While a regional coastal environment plan spans the MHWS boundary for seamless regional policies on coastal hazards, the issue of integration between district plan rules and regional rules still arises.

The case study regional coastal environment plans and regional coastal plan do not contain rules for land based development in coastal hazard zones. Therefore, the primary concern is over rules to address property protection works. Protection works can span the MHWS or move back and forth across MHWS. Their status is uncertain, notwithstanding the pragmatic approach adopted by the Planning Tribunal in the Wainui Beach, Gisborne, *Falkner* declaration.

The ideal would be to have rules for protection works that are the same or similar in the district plan and the regional coastal plan (with at least the same activity status, eg discretionary), and/or to have a rule in the regional coastal environment plan requiring a discretionary activity consent for protection works on land, and/or to have an agreement to transfer powers to one of the councils for protection works (or other activities that potentially span the line of MHWS).

The need for integration of rules and policies between the regional plan and district plan is particularly underscored in the case of the Christchurch City Plan and the Canterbury Regional Coastal Environment Plan, where the Regional Coastal Environment Plan contains rules for development within coastal hazard zones on land. The Environment Court decision (C60/2003 New Zealand Cashflow Control Ltd v Christchurch City Council and Canterbury Regional Council) on a reference concerning management of the coastal hazard zones at South Brighton Spit, clearly demonstrates the confusion when there is a failure to achieve integration of rules across MHWS or consistency of policies between regional and district plans.

⁴⁰The limited number of case study regions, where only one region with a Regional Coastal Plan, is not sufficient for firm conclusions. Further research is warranted. See peer review discussion in Appendix 5.

The NZCPS should promote integration across the MHWS boundary in terms of regional and district plan provisions.

7.4 Avoiding confusion over ‘risk’

Section 7.2 above identifies the absence of a vision or policy concerning ‘risk’ as one of the more obvious gaps in the NZCPS.

However, the concept of ‘risk’ will have to be introduced carefully and rigorously into the NZCPS.

The “Climate Change and Coastal Hazards Guidance Note” has extensive discussion of ‘risk’ and ‘risk based analysis’. (see Appendix 2)

As defined in that guidance note, ‘risk’ is a combination of consequence *and* probability (or value of assets under threat x likelihood of damage to those assets).

Other researchers (Alexander 1993, Cannon 1994) have used the concept of ‘vulnerability’ in ways comparable to the concept of risk as defined above. (There is a clear connection between the degree of vulnerability of assets and the consequence of a hazard event on those assets.)

In relation to scope, it is important for sustainable coastal hazard management that the risk to public assets, usually as a result of property protection works, is not left out of the equation.

In addition, one difficulty with the term ‘risk’ is that it is used synonymously with ‘probability’ or ‘likelihood’, even by coastal hazard practitioners. Parts of a ‘high risk zone’ or ‘primary risk zone’ may actually represent a very low coastal hazard risk (as defined above) if they have few property assets within them.

This can cause confusion, and it creates a challenge for nomenclature. For example, ‘primary risk zone’ and ‘high risk zone’ and ‘2060 hazard risk zone’ and ‘2060 hazard threat zone’ (to avoid misuse of ‘risk’) can all describe a zone that is predicted to be subject to coastal hazards within 50 years. Standardised and internally consistent nomenclature would assist the introduction of ‘risk’ into the NZCPS, and the interpretation of the NZCPS ‘risk’ vision or policies within the community.

It is noted that a consistent nationwide approach to coastal hazard analysis and planning nomenclature would assist generally in promoting sustainable coastal hazard management.⁴¹

⁴¹As addressed by Alexander 1993 and Cannon 1994, the Dahm peer review highlights the extensive social science literature on the conflicts that exist between technocratic perceptions of risk and community perceptions of risk. This should be carefully addressed in any review of nomenclature, but does not necessitate confusing and conflicting nomenclature.

7.5 Identifying coastal hazard zones

The review revealed that there is no consensus on the need to improve council information bases and to incorporate new information on hazards into district plans, with many councils (notably in Auckland) resisting the NZCPS policy seeking identification of coastal hazard areas.

The case studies have led the reviewer to conclude that detailed district-level identification of coastal hazard zones is a cornerstone of sustainable coastal hazard management.

While there was a call from some for detailed guidance in the NZCPS on methodologies for coastal hazard analysis and coastal hazard zone delineation, much of that task is properly left to guidance notes that are more readily updated to incorporate new information or improved methodologies.

The NZCPS should, however, contain policies that require identification of coastal hazard zones, and that:

- confirm a 100-year planning horizon;
- confirm sea level rise is occurring and require use of the latest figures;
- confirm the use of graduated risk zones;
- promote rigorous standards for hazard assessment methodologies;
- require ongoing research and monitoring of coastal processes; and
- require updating of coastal hazard zones every five years.

7.6 Improving implementation

A perception identified during this review is that the effectiveness of the NZCPS coastal hazard policies is threatened less by a flawed body of policies than by a lack of implementation of the policies at the ground level.

This review has also found that more effective implementation of sustainable coastal hazard management is primarily hindered by a lack of information on, and acceptance of, the reality of coastal hazards and the costs and benefits of coastal hazard responses *rather than* by any inability to quantify (in a precautionary way) the extent of coastal hazards and the extent of coastal hazard risks.

This is not to underestimate the technical difficulties and uncertainties of coastal hazard analysis, which are demonstrated in expert evidence to the Environment Court⁴². Nevertheless, the Environment Court has generally supported the coastal hazard lines proposed by councils and their expert consultants.

The hindrance particularly relates to reconciling long-term cost/benefits against short-term cost/benefits, and developing mechanisms for sharing between the owners of hazard prone properties and the wider community (including, perhaps, central government), the financial responsibility for implementing integrated strategies.

⁴²eg. Skinner v Tauranga District Council A163/2000

The lack of progress in achieving community awareness and acceptance of basic principles of sustainable coastal hazard management, strongly indicates that national leadership and a champion are needed if progress with implementation is to be progressed.

Of equal importance would be capacity building in local government and local communities, so that national leadership and guidance can be translated into local action. (National guidance is a part of capacity building at the local level, but the many other components of capacity building are beyond the scope of this review.)

Accompanying such capacity building should be priority action to effectively monitor the success of management and implementation.

Otherwise, the NZCPS and complementary guidance notes may continue to develop and refine coastal hazard policies that would deliver a sustainable future, but these coastal hazard policies will never be implemented.

In relation to the NZCPS policies themselves, given their effectiveness to date, the next stage for the coastal hazard related NZCPS policies could be to:

- articulate a vision;
- promote wider professional and community acceptance;
- promote more specific objectives/policies in Resource Management Act plans; and
- give more guidance on rules and other methods.

Complementary guidance notes are an appropriate location for detailed guidance on the latest science, on methodologies and available technology, and on legal constraints, etc.

One such guidance note is the “Coastal Hazards and Climate Change Guidance Note” prepared for the NZ Climate Change Office of MfE, which is currently in draft and is intended to provide guidance on coastal hazards, coastal hazard analysis, and response methods generally (including, of course, careful attention to the effects of climate change).

A close relationship between the NZCPS and the “Coastal Hazards and Climate Change Guidance Note” is therefore recommended (see Appendix 2).

7.7 Creating more certainty

While the barrier of short-term cost that is often imposed on existing property owners by sustainable coastal hazard response strategies cannot be overcome by policies (and is demonstrated in the case studies to be a complex and intractable problem), the same does not apply for prospective purchasers and developers.

The clear and dominant message from consultation was that developers want certainty: developers do not want to buy property and then be unable to use or develop it as they had anticipated.

As a council officer, the reviewer has been in the position of advising developers who had purchased residential zoned property (where subdivision was a controlled activity) that they are unlikely to get consent to subdivide the property because it is in a high risk hazard zone

and would not meet the requirements of section 106 of the RMA. That is not welcome advice after the property has already been purchased.

Continuing with such uncertainty will create ever deeper and more intractable coastal hazard management problems into the future.

Creating certainty for prospective purchasers would avoid propagating the problems of property owner expectations, and would reduce future litigation and coastal hazard management problems, because coastal hazard prone properties would change hands with reasonable expectations on the part of both buyer and seller.

Future owners, future developers and market forces would be able to flourish within well defined and well justified boundaries based on sustainable coastal hazard management.

That, however, remains only an ideal because of the costs imposed on the current owner of the land, and because of the difficulty of delivering well justified boundaries in relation to coastal hazards, due to their inherently uncertain and complex nature.

It is to be noted that the costs on current owners may not be as high as is feared by some owners and councils. The imposition of coastal hazard zones has had little effect on the rapidly rising prices of coastal hazard prone properties in places such as Wainui Beach and Tauranga. The enormous demand for shoreline properties is delivering high property values even where rules limit development to the existing use of a single dwelling (and where that dwelling would have to be replaced with a relocatable dwelling).

A national vision, rigorous standardised methodologies for delineating coastal hazard zones that are expertly applied, and the precautionary approach all have a role to play in delivering greater certainty in a way that is, and is seen to be, fair to all parties.

The NZCPS has a role to play in guiding and giving a national perspective to planners and decision-makers over these conflicts between current property owner expectations, protection for future property owners, prospective developer desire for certainty, and the limits of science and the precautionary approach.

7.8 Coastal hazards in existing settlements

The review revealed a long list of issues related to management of coastal hazard areas with existing development (which includes management of new development and infill development in those existing settlements). Implementing effective management in coastal hazard areas with existing development faces many barriers. The case studies make this abundantly clear, particularly the Wainui Beach seawall case study.

The complexity of this matter calls for a broad-ranging, integrated approach involving both a range of professionals and the wider community affected by coastal hazards and coastal hazard responses. The strategies in various stages of preparation and implementation for Wainui Beach and four sites in the Auckland region demonstrate both the complexity of

developing integrated responsibilities and useful examples as to how it can practically be undertaken.⁴³

Some considerations involving these inter-related issues, and that are important for the review of the NZCPS, are discussed below under the following headings:

- sustainable coastal hazard responses
- controlling additional development
- relocatable buildings
- managed retreat
- natural character vs amenity values
- private good vs public good
- targeting the protection of important public assets
- long-term scenarios.

7.8.1 The high cost of implementing sustainable coastal hazard responses

One significant issue for sustainable coastal hazard management is the high cost of reducing the coastal hazard risk for existing development without adverse effects on coastline features and values. This represents a barrier to implementation that cannot be ignored in a review of the effectiveness of the coastal hazard policies.

(This issue is a reality notwithstanding the high cost that will be paid by the wider community if sustainable response options are not implemented as an alternative to hard property protection works; and notwithstanding that the high cost of all protection could have been avoided with better or more precautionary planning and coastal development in the first place.)⁴⁴

This review has encountered repeated assertions from coastal planning, coastal process, and coastal engineering experts from New Zealand and overseas that, in many coastal hazard areas, building hard property protection works will be either physically unsustainable or not a sustainable management option under the RMA⁴⁵.

Nevertheless, the seawalls get built anyway (with the exception of further inadequately designed seawalls at Wainui Beach that were refused consent because of the inadequate design). As Taranaki Regional Council has stated during consultation, the NZCPS policies have created an interesting debate, but not one of the several seawall applications has been declined in that region since the NZCPS was gazetted. The same is true for the case studies at Waihi Beach, and in Kapiti.

⁴³ *The Wainui Beach Draft Management Strategy*.

Muriwai Coastal Hazard Management Strategy, June 2002, Coastline Consultants Ltd.

Coastal Hazards and Management: Hudson's Beach, Manukau Harbour, July 2001, Coastline Consultants Ltd.

Browns Bay: Coastal Hazards and Management, June 2002, Coastline Consultants Ltd.

Onetangi Beach Coastal Hazard Management Strategy, March 2002, Tonkin & Taylor Ltd.

⁴⁴The Dahm peer review identifies that backstop walls buried further landward, and living with erosion on a residential property that does not threaten the dwelling, are viable alternatives that are often little more expensive than unsustainable protection works.

⁴⁵For example, Komar, Patterson, and Gibb in relation to the Wainui Beach seawalls.

It is difficult to see this reason for policy ineffectiveness (ie this barrier to sustainable management of coastal hazards) going away no matter what policies are developed and placed in statutory plans.

When considering the difficulties facing beachfront residents at Wainui Beach, both the High Court and the independent Hearing Commissioners have alluded to compensation. They were concerned that in New Zealand, unlike in other countries, there is an absence of any provision for compensation where protection of properties is found to be contrary to sustainable management, and people are thereby forced to abandon or move their homes.

See Appendix 14 for a discussion about providing material assistance to support the implementation of sustainable coastal hazard management.

7.8.2 Controlling additional development

One clear message to be gained from the difficulties already experienced with existing development is the necessity to avoid creating new hazard risk situations: ‘prevention is better than cure’⁴⁶.

Allowing new additional development within existing developed areas compounds the management problems and makes the difficulty of finding solutions even more intractable. This is particularly the case when sustainable solutions are sought that will protect public assets as well as private assets.

There are great difficulties with getting property owners to relocate away from hazards, even when they can do so within their own properties. This difficulty should sound a note of caution to authorities seeking to rely on relocation conditions as a standard that would allow more intensive development with coastal hazard zones (see 7.8.3 Relocatable buildings).

Similarly, relying on seawalls or other protection such as beach nourishment is also uncertain given the difficulty of getting a commitment to maintain works for 100 years in the face of a likelihood of increasing hazard and hence increasing maintenance costs.

For existing communities in coastal hazard areas, there is a spectrum of management options, ranging from a focus purely on short-term property owner expectations at one end to a focus purely on long-term community expectations at the other end. The NZCPS should take an explicit position as to the point along the spectrum that represents sustainable coastal hazard management of existing hazard prone communities.

At one end of the spectrum would be the option of not allowing any development or re-development that increases the value of assets at risk within areas subject to coastal hazard risk within the next 100 years (‘coastal hazard zones’). Existing use rights in the Resource Management Act section 10 (which establish the right of property owners to re-develop “if the effects of the use are the same or similar in character, intensity or scale” as the existing development) would continue, but it should be explicitly recognised that an increase in coastal hazard risk is, in fact, an increase in effects.

⁴⁶ “A personal contribution to coastal hazard risk assessment in New Zealand,” 1998 Gibb

In the middle of the spectrum would be the option of disallowing or prohibiting subdivision or multiple dwellings in coastal hazard zones, and allowing re-development of single dwellings on the basis of relocatability and other methods for reducing vulnerability.

At the other end of the scale, is permissive development at the risk of the developer, with only warnings for prospective purchasers.

There is the issue of how much re-development of a single dwelling and associated buildings should be allowed beyond what is provided for as an existing use right, and under what conditions. Property owners reasonably expect to have some scope for enlargement and different floor plans. The *quid pro quo* being developed by some councils, such as Tauranga and Western Bay of Plenty, is to allow such scope on the basis of setbacks or design features that reduce the threat, along with covenants requiring removal in the event of imminent threat. Such approaches should be supported in the NZCPS policies.

Guidelines for effective and enforceable control of development in coastal hazard zones would also be helpful to councils, and would require legal, social and planning research as well as a commitment to supporting enforcement action.

7.8.3 Relocatable buildings

One significant issue which relates both to risk reduction and certainty is the method of requiring relocatable buildings in coastal hazard zones, as a way of reducing coastal hazard risk and mitigating the effects of coastal hazards. This method has become almost universal in district plans in New Zealand.

On the face of it, the method is a prudent response and can avoid damage to the building from coastal hazards. However, as expressed during the *Carter* consent process in Western Bay of Plenty, it is an unproven method (in that it has yet to be implemented successfully) and can have unintended effects.

The unintended effects and outcomes most apparent from this review are the likely:

- property owners' resistance to relocating regardless of legislative or title requirements, because of the cost of relocation, loss of beachfront location, social disruption, and abandonment of (once) valuable land;
- reluctance of decision-makers, including the Courts, to enforce relocation, especially in the absence of compensation for property owners; and
- increased development, and hence increased property assets, that are granted consent in coastal hazard zones on the basis of relocatability (despite the above problems).

The application of the method also varies widely, with Kapiti Coast and the Western Bay of Plenty districts representing extremes along the spectrum:

- *Kapiti Coast*: a basic requirement for a relocatable design (without assurance of practical relocatability on or off the site, nor any title covenant that notes the relocatable design or warns of a requirement to relocate in the event of imminent threat).

- *Western Bay of Plenty*: a requirement for practicable and ready relocatability, complete with a contingency plan and a title covenant requiring relocation in the event of imminent threat with explicit trigger criteria.

The widespread use of this method in district plans strongly indicates that it is a priority for the NZCPS, research, and/or guidance notes, to examine and provide guidance on relocatable development in relation to increased coastal hazard risk, future social impact, and enforceability.

7.8.4 Managed retreat

Managed retreat as a concept has proven to be an anathema to property owners and is often perceived as an insensitive bureaucratic impingement on landowner rights.

However, it may well be a case of a misunderstood concept. There are few situations in New Zealand where whole communities (or many houses) are likely to be under imminent threat at any one time and require a mass shift. Managed retreat can extend from restrictions on new development (requiring a more landward location); to contingency plans for removal of individual houses as they come under imminent threat; and to purchase by councils (for reserve purposes) of properties as they become uninhabitable due to erosion or flooding or the imminent threat of these hazards.

Under the Resource Management Act, managed retreat never means the forced removal of dwellings as an alternative to seawall construction – councils do not have such powers, even if they wished to take such draconian action.

The real issues are:

- under what circumstances is it reasonable to require residents to live with erosion (ie the loss of some portion of their properties, the uncertainty, and the threat of possible imminent damage to dwellings and other built assets) as an alternative to hard property protection works that will create uncertainties and threats for public assets and amenity values that are important to the wider community; and
- under what circumstances is it reasonable to have a requirement that dwellings and other assets are to be relocated if and when the threat of damage by coastal erosion or flooding does become imminent; and
- how should costs and responsibilities for action be apportioned between the landowner, the wider community, and the taxpayer when relocation does have to take place?

The option of a carefully designed strategy of avoiding threats to new development and actioning the retreat of existing development, as individual assets come under imminent threat, would in many cases be more certain and more prudent than reliance on seawalls.

Managed retreat would deliver benefits to both property owners and the public in the longer term, but must surmount the barrier of short-term costs to the current property owners. Material assistance to property owners within a supportive and coherent strategy may be the only way to achieve this.

The option of re-developing assets further landward when opportunities arise, such as when existing properties are to be re-developed, is an important component of a managed retreat strategy, and one that can avoid the barrier of high short-term costs.

There is a strong consensus within the coastal hazard management community (if not amongst beachfront landowners) that the option of a coherent strategy of managed retreat must not be ignored or abandoned by authorities.

This is despite the often quoted High Court comments in the *Falkner* Wainui Beach decision concerning “the grim connotation for beachfront property owners” and the “seemingly insensitive application of a ‘managed retreat’ policy” (see Appendix 12).

This highlights that the challenge to authorities is to get buy-in to a managed retreat strategy from the local and/or wider community and, even more challenging, to get buy-in and some level of acceptance from the resident groups who represent those likely to face relocation.

In the same High Court judgment, the issue of compensation was raised, and the absence of provision for it in the Resource Management Act criticised. It is clear that any successful strategy for ‘managed retreat’ may well have to include assistance measures for those who are expected to retreat.

In the long-term, assisted managed retreat from high energy coastal hazards may be the most practicable and affordable option for property owners – as well as for a contributing community, which otherwise faces financial costs from consent processes and/or civil litigation and/or contributions to expensive protection works, as well as the loss of their Queen’s Chain values.

During the Wainui Beach seawall application hearings, it was clear in the view of the expert witnesses that the seawall proposed would not give adequate protection from even moderate storms, and that a substantially larger (and more expensive) engineered structure would be required. The applicants did not indicate a willingness to construct such a seawall. It is only after 12 years of litigation that the community has prepared a draft strategy involving managed retreat as a component of a broad-ranging strategy for coastal hazard response.

Similarly, along the Kapiti Coast at south Raumati, existing dwellings are perched at the top of a 6 metre erosion scarp, and new dwellings are being constructed, behind a seawall that is inadequate to protect those properties from even a series of moderate storms. That seawall was built in 1978, two metres lower than design height, and the expensive works required to upgrade it have not been undertaken in the 25 years since. Unfortunately, the draft strategy now released for that area focuses almost entirely on the upgrading of seawalls without the explicit consideration of long-term costs, scenarios or alternative response strategies.

Climate change will not assist with the affordability of hard property protection works along coastlines that will move from dynamic equilibrium to retreat, or along coastlines where existing retreat will be accelerated (such as at Raumati).

The draft NZ Climate Change Office *Coastal Hazards & Climate Change Guidance Note* reinforces this point repeatedly:

Existing seawalls and coastal protection are, in most cases, not as permanent as the residents apparently 'protected' by them assume. ... Long-term, the protection offered by hard structures is often ineffective, highlighting a need to recognise alternative management approaches to address the risk to developed areas. (Section 3.4.1)

In cases where there is a high value assigned to 'dry' land or properties ... [the option of hard structural works] has generally been implemented. ...

In cases where there is a high value assigned to public and private assets, ... a combination of options may need to be implemented. Because beaches and dunes are such a popular and integral part of New Zealand culture, there will inevitably be conflict over the selection of options. Beaches that are attractive for seaside development are also attractive for public recreation, and beaches that are near urban centres are valuable both for residents and the community because they are the most accessible. (Section 5.5.1)

Hard structural defence works are often cited as the more socially and economically preferred option of reducing the risk of coastal erosion to existing properties on account of the greater short-term security they can provide to land-based assets. Nevertheless, hard structural defence options may have a number of adverse effects on the coastal environment, and their maintenance and upgrading over time can be very costly, particularly in the face of increasing hazard due to climate change. (Section 5.5.5)

Even though 'managed retreat' may seem socially unpalatable, it is a concept that needs to be considered now in the national policy context. While at a local level, hard property protection works to protect high value development (and rates income, and litigious beachfront owners) may seem attractive now in the short-term, at a national level a long-term liability is being created for both private property owners and the wider community, especially as climate change progresses.

A future where many of the most accessible and popular beaches are seriously degraded by 'coastal squeeze', and large costs are looming for upgrades of increasingly ineffective hard protection (which would increase beach degradation) or for relocation of development, will be equally socially unpalatable.

The need to plan ahead has been supported by the Courts, and this may be a matter where the NZCPS (possibly in conjunction with other initiatives) should take a leadership role.

This discussion has raised issues of the values at stake, the difficulty of reconciling the private good and the public good, the particular conflict at popular beaches with high amenity values, and the need for comparison of alternative options over the longer term. These issues are addressed further in the following sections.

7.8.5 Natural character vs amenity values

This review repeatedly came across the reported observation that development and modest early seawall constructions had already severely compromised natural character. In cases where there were already substantial seawalls, the perception was often that there was no natural character left and hence no public asset left that was worth protecting.

Conversely, natural character was often equated with visual appearance, to the extent that softening the appearance of a seawall so that it blends in (when it has not recently been washed by storm waves) was considered to address the effect of the seawall on natural character.

These contradictory perceptions on the part of council officers and decision-makers are despite the broad nature of natural character as set out in Section 1 of the NZCPS and in case law⁴⁷.

Despite the dominant nature of substantial seawalls (when looking landward) in places such as South Raumati, so long as there is a beach with waves lapping on it and Kapiti Island looming across the water, there is much that attracts Raumati residents to the beach.

Perhaps asking: “How much natural character is left?” is the wrong way of framing the question when seeking or assessing coastal hazard response options.

For many communities and professionals, it appears that the term ‘natural character’ elicits little understanding, and has little resonance with their experience of beaches and coastline management. This represents a substantial challenge to implementing sustainable coastal hazard management.

Loss of natural character is a very important matter both in New Zealand and internationally, and the NZCPS must find a way to convey the reality and the seriousness of natural character loss to a New Zealand public that does value the natural character of the coast, but does not always appreciate the cumulative or long-term losses that human actions can set in train.

To highlight this challenge, and to elicit responses ‘outside the square’, the reviewer has considered the possibility of terms that encapsulate not only natural character but also the other essential values of the narrow coastal strip along New Zealand’s coastline that are the foundation of the relationship between New Zealanders and their coastline.

For beaches and the coastal strip generally, it is all the values that people associate with the Queen’s Chain that are important to the community and that attract people to the coast: a combination of natural character, public access, amenity values, recreational values, cultural values and landscape values, that allow people to experience and connect with the sea and with the dynamically changing foreshore and beach (and dunes and wetlands where they remain).⁴⁸

⁴⁷See “Natural Character: Concept Development in New Zealand Law Planning and Policy” Environment Waikato Technical Report 2000/4.

⁴⁸The report “Walking Access in the New Zealand Outdoors,” August 2003, MAF sees advantages in strengthening the concept of the Queen’s Chain rather than focusing on the confused and limited legal meanings of the term.

The term ‘Queen’s Chain values’ is used in this review as shorthand for all these particular coastline values that need to be addressed in sustainable coastal hazard management. The reviewer hopes that ‘Queen’s Chain values’ or some similar term will elicit more understanding and response from New Zealanders in the discussion about what expectations they have for sustainable management of our coasts.

7.8.6 Private vs public good

The case studies in this review demonstrate that there is at present a real and deep conflict in coastal hazard management between private goods and public goods when existing development is threatened and protection demanded.

Further, when a council receives applications for ongoing development or development of private assets in coastal hazard areas (promoting private goods), there is strong pressure to allow that development and to mitigate effects on the environment (the promoting of public good) by way of consent conditions.

Even where the consent conditions are very specific and enforceable, the case studies demonstrate that it will be very difficult for the council to successfully implement those conditions when ‘the crunch comes’ and families are expected to uproot their homes and lives.

Essentially, sustainable management of developed coastal hazard areas is going to have to go beyond the imposition of careful regulation, and the NZCPS has a role in determining what outcomes and processes will be acceptable to the community.

Some of the review’s case study plans and consents, and the *Climate Change and Coastal Hazards Guidance Note* indicate that a new attitude or paradigm is developing in response to the problem of ‘permanent’ habitation on ephemeral coastal features: An acceptance that property rights are effectively a temporary right to occupy and enjoy the ephemeral land, with assets removed when the land is about to become the beach, so that the community can visit and enjoy the natural and dynamic features of beach and dune as part of their cultural inheritance.

The Queen’s Chain concept is just such a paradigm for the same narrow strip of land next to the water’s edge. That paradigm recognised that there is a particular public community of interest in the coastal strip which is of such importance to the New Zealand culture that it warrants limiting private property rights. The Queen’s Chain social contract is that subdivision for private development can take place near the sea and rivers, but that a strip of land is to be set aside for public access, recreation and amenity values (and perhaps also cultural and spiritual reasons).

Perhaps in the face of climate change and ‘coastal squeeze’, it is time to embrace constraints on the right to build hard protection works, where those works are likely to degrade or destroy that same strip of land and those same public expectations for a coastal strip that retains its natural values and is accessible to the public. Such constraints could be seen as an updating or a corollary of the Queen’s Chain concept in order to protect Queen’s Chain values over time.

The essential components of such a paradigm that were identified during this review, either explicit or implicit, are:

- that the territorial authority will identify the extent and degree of the erosion, sea flooding and land instability threat to private property from coastal hazards. This will be done by the inclusion of rigorously derived coastal hazard zones in the district plan, and inclusion of comprehensive information in Land Information Memoranda (LIMs) and Project Information Memoranda (PIMs);
- that the hazard zones will be reassessed every five years, and it will be recognised that they are likely to move inland (i.e. both the extent and degree of threat will increase over time for individual properties) as sea level rise continues, and as any existing trends of erosion also continue;
- that prospective purchasers, or property owners considering re-development, will therefore be able to make their investment decision based on the best knowledge and information on coastal hazard risk that is available at the time;
- that private landowners who make the decision to invest in development within hazard zones do so at their own risk, which will be formalised for them and prospective purchasers by covenants and encumbrances on the property title (Resource Management Act and Building Act), with hard protection works not being a future option where coastal public assets and values would be significantly degraded over time by those works;
- that property owners would then be able to enjoy the occupation of their ephemeral land and/or properties until such time as natural coastal processes interfere with that enjoyment;
- that property owners would then be able to respond to that interference in ways that do not degrade the Queen's Chain values (such as beach nourishment, buried backstop walls, or simply living with erosion) until those non-degrading responses become unaffordable or impracticable and the coastal hazards make continued occupation untenable – property owners would then have to retreat as the alternative to undertaking works (such as seawalls) that would have the effect of significantly degrading the Queen's Chain values; and
- that, in the event of imminent threat making continued occupation untenable, both individuals and the community will put their available resources towards response options that will benefit both the property owners and the community over the longer term – in the future, any community resources directed towards material assistance to property owners, as part of an integrated response mix, could be directed to the increasingly small group of property owners who made their investment without the availability of information on the risks to that investment from coastal hazards.

The NZCPS, as the relevant national policy, will have to determine whether to support or promote such a paradigm in response to the initiatives already begun by local authorities. Alternatively, the NZCPS should promote a variation of this paradigm, or a different paradigm.

7.8.7 Targeting the protection of important public assets

Much of the discussion above applies particularly to accessible and popular beaches. It may be possible to target the most severe restrictions on development and property protection works to those accessible and popular beaches, thereby avoiding unwarranted restrictions on development and protection works where coastline values are not significant to the community (i.e. not part of a comprehensive network of popular and accessible beaches/rocky platforms/coastal cliffs).

It is important, however, not to lose sight of the fact that all beaches have values for some part of the community, and may in the future have greater values for a larger number of people in a changing (and probably expanding) local coastal community. The ability to reassess the values of beaches, and the needs for a network of beaches, are implicit in the requirement to review district and regional plans, but should probably be made explicit in any community consultation and plan provisions.

NZCPS Policy 3.5.2 currently requires the identification of places where it is desirable that physical access to and along the coastal marine area by the public should be enhanced.

For a targeted and integrated approach to avoiding significant effects over time from property protection works that harden ephemeral natural features, the NZCPS could extend the approach taken in the Auckland Regional Coastal Environment Plan and require regional or district plans to identify:

- a network of beaches and other shorelines in a district or region where it is important to the community to protect the Queen's Chain values, and
- which of those beaches are or will be experiencing a trend of erosion (ie where hard protection works will create 'coastal squeeze').

The NZCPS could support policies and rules that would prohibit hard protection works (or severely restrict hard protection works, eg only allow them where coastline values will be protected over the long-term by a commitment to a complementary beach nourishment programme) on the network of identified accessible beaches with high recreational and cultural values in each district.

This approach would require the development of detailed strategies and/or action plans akin to the Wainui Beach Management Strategy or some of the Auckland region site specific strategies. Such an approach is an alternative to the incremental loss of important coastline values through attempting to deal with cumulative effects on a case-by-case basis.

The Wainui Beach case study also provides a reminder that tangata whenua have a longer period of attachment to the coast and generally have a more explicit relationship to their coastal taonga than the rest of the community. They need to be involved in identifying the coastlines and values that are important to them. They also need to be involved in formulating priorities for the protection of the values possessed by the important sections of coastline (including iwi and hapu spiritual values and connections not shared by the wider community).

The first outcome would be to preserve a network of beaches that would meet the needs of future generations to have accessible beaches without degraded Queen's Chain values where they can experience the Kiwi cultural connection to the coastline and sea.

The second outcome would be to provide scope for those who wish to live behind seawalls to do so at their own risk, and without having a significant effect on the ability of the coastline in each district to meet the needs and expectations of the wider community into the future.

Specific approaches such as this may be a partial answer to the ineffectiveness of NZCPS Policy 3.4.6 in achieving alternative responses to seawalls.

7.8.8 Long-term scenarios

It has become apparent from the review of many of the case study plans and consents that the criterion of 'best practicable option for the future' in NZCPS Policy 3.4.6 is almost universally truncated to the criterion of 'best practicable option' in plans and consent reports.

One approach that could respond to the many concerns reported to the reviewer about the poor wording and ineffectiveness of this policy, would be to require long-term scenarios for hard property protection works as well as alternative practicable options (usually a mix of response options), so that the future consequences would be more apparent to both the public and professionals. Those future consequences are generally far from apparent either to the general public or to many planning professionals.

Even for coastal hazard professionals, it would be a useful discipline to take the coastal hazard analysis of a site, and combine that with knowledge of the interactions between coastal processes and hard protection works, to prepare explicit scenarios for different times throughout the lifetime of the protection works and alternative options, say at 25, 50, 75 and 100 years.

The scenarios for all options should be as comparable as possible. For options involving protection works, the scenarios should include the state of the protection works, the state of the beach in front of the protection works, the state of the backshore, the state of the land at either end of the protection works and 'downstream', and the life cycle costs of maintaining and upgrading the protection works.

The absence of such scenarios is particularly noticeable in the case of the draft Kapiti Coast Erosion Strategy. For example, given that the seawall at Raumati is already over 40 metres seaward of the line of the dunes along the unprotected Queen Elizabeth Park, and the beaches along Raumati are already inundated at high tide, these questions can be asked:

- what extension of the existing seawalls would be required to deal with end effects and sea level rise likely in 25 years, 50 years, 100 years?
- will there be a beach at low tide?
- what level of seawall upgrading is likely to be required to deal with the reduced beach buffer and sea level rise?
- what will costs be over the period? and

- what level of controls on development will be required to avoid worsening the risk under the scenarios of increasing attack on seawalls and increasing asset values (i.e. increasing consequences of a 50- or 100- year event)?

Similarly, what would be the costs and outcomes at different times for beach nourishment or a combination of beach nourishment, buried backstop seawalls, and managed retreat?

Apart from enabling a more informed debate in the community over the available response options, such scenarios could foster a greater general awareness and understanding in the community of coastal hazards and long-term consequences of coastal hazard responses.

That increased community awareness and understanding could in time translate into increased uptake and adoption of long-term sustainable strategies by councils and affected stakeholders.

7.9 Coastal retreat and coastal squeeze

One of the complexities of coastal hazard management discussed in Section 1 and Appendix 3 is the interaction between seawalls and a retreating coastline, which is called ‘passive erosion’ or ‘beach profile truncation’.

Over the longer term, there are very different effects from hard property protection works when they are placed on a retreating shoreline, compared with their effects when placed on a shoreline in long-term dynamic equilibrium. (Seawalls placed near the seaward edge of the dynamic envelope of shoreline movement on a beach in dynamic equilibrium can also have very substantial ‘coastal squeeze’ effects for a large proportion of the time, ie whenever the beach is not near an accretion phase peak.)

Therefore, it is important for the coastal hazard related NZCPS policies and district plan provisions to differentiate between the two situations when promoting the recognition of effects, and when promoting different response options or ‘appropriate’ design and location of protection works.

It is also important to emphasise the different scenarios because of the increasing number of shorelines that will switch from dynamic equilibrium to long-term retreat as a result of climate change.

Where there is a trend of erosion (including, in future, as a result of sea level rise) the beach in front of the seawall will get narrower and narrower as the whole beach profile moves landward, until there is no dry beach remaining. Such degradation or loss of the beach adversely affects all of the Queen’s Chain values. The loss of the beach buffer also enables larger waves to reach the seawall, which increases undermining and damage to the seawall, leading in turn to high maintenance costs and the need to progressively upgrade the seawall at substantial capital cost.

Where there is a dynamic equilibrium, there will be periods when the beach in front of the seawall is narrow and the seawall prominent, and periods when the beach is wider and the seawall partly buried and less prominent. Adverse effects will therefore be less over time than where a trend of erosion exists. Maintenance costs for the seawall will also be lower, and upgrading may not be necessary over time.

There is one other characteristic of coastal retreat that raises issues for sustainability. That is that the nature of the risk from a trend of erosion is different to the nature of risk for most other coastal and natural hazards.

Hazards such as river flooding, sea flooding, and tsunami are events which may cause considerable damage, but the effects are not generally irreversible – damage is repaired and life returns to normal until the next event. Acceptable hazard threats are based on a 100-year flood or a 50-year flood (1% or 2% annual probability floods), and represent the level of probability or frequency that is considered acceptable for having to repair damage and face temporary disruption.

The expectation for river flood hazards is that during the 50- or 100-year planning period, probability and threat will not have changed substantially. Hence, the difference between:

- a 1% chance of an event of a certain magnitude each year (1% annual probability), and
 - the chance of such an event once every 100 years or so (a ‘100 year event’),
- and the public lack of awareness of the difference between the two, does not lead to serious misunderstandings as to the probability and threat involved.

Cliff collapse or beach and dune erosion is an entirely different sort of threat. If a 100-year planning period is used, it does not mean that there is a 1% chance each year of damage in year 1 up to year 100. Rather it means that in 100 years the probability of damage will have changed (depending on location) from a low probability to a very high probability.

Moreover, if the damage comes to pass, it will mean permanent and irreversible loss.

A 100-year coastal hazard zone for erosion or cliff collapse is therefore not comparable with a 100-year (1% annual probability) flood hazard zone.

The issue does not just relate to permanent private property loss with dune erosion or cliff collapse hazard. It also relates to permanent loss of public access and amenity values if development has extended up to the edge of the 100-year coastal erosion or land instability hazard zone.

A significant probability of permanent loss from erosion or cliff collapse of a Queen’s Chain reserve in 100 years is not the same as an acceptably low 1 in 100 chance each year of temporary disruption to public access from flooding along a section of a Queen’s Chain reserve.

The *Henry* case in Kapiti touched on this issue of permanent loss, but the implications have yet to be properly aired and the planning consequences considered.

The question that should be asked, at least for greenfield development, is: will providing for beaches to exist and for public access to remain for 100 years be sufficient to have achieved

sustainable management? (See the BBC News item of 24 July 2003: “British beaches gone within 100 years” in Appendix 3.)

7.10 Other issues

For reasons of brevity, other issues identified in the review, and some available responses, are listed in note form:

7.10.1 Market mechanisms

Possible mechanisms include:

- insurance to reflect risk;
- charges, levies or special rating districts to fund more of the total costs of hazard management (including the purchase of coastal properties where the purchase of just a few private properties would remove barriers to sustainable response strategies for a whole district or region)⁴⁹; and
- apportioning response costs to those who benefit.

7.10.2 An integrated approach to hazard management & coastal value protection

This could entail:

- development setbacks vs coastal hazard buffers (especially rural and greenfield); and
- greenfield development setbacks to allow for migration of natural features, the protection of significant ecosystems and/or natural features, and the long term protection of public access.

7.10.3 Different agendas

The points raised include:

- elected councillors with commitments, philosophies, perceptions and priorities that run counter to the intervention and regulation required for sustainable coastal hazard management;
- developers and development professionals with a focus on short-term goals; and
- the need for training for councillors and development professionals.

⁴⁹ The Dahm peer review 2004 reports that Environment Waikato and the Thames Coromandel District Council are presently considering the use of special rating districts for a large part of the Coromandel to enable the full or partial purchase of some coastal properties to effect sustainable outcomes and protect coastal values desired by the community.

8. Conclusion and Recommendation

8.1 Introduction

This section completes the review of the effectiveness of the NZCPS coastal hazard related policies, concluding that those policies need to be changed, and a recommendation that the Minister of Conservation review the NZCPS in accordance with the provisions set out in the Resource Management Act.

A summary of changes to the coastal hazard related NZCPS policies that could be considered during the required further reviews by the Department of Conservation and a Board of Inquiry is included as part of the recommendation.

Also included as part of the recommendation is a brief list of some other initiatives, outside the scope of NZCPS policy changes, that could be considered as part of promoting and implementing sustainable coastal hazard management in New Zealand.

For conciseness and as a basis for discussion, the suggested changes and additions to the coastal hazard related NZCPS policies have been set out in the form of draft NZCPS policies. These are contained in Appendix 15.

8.2 Conclusion

The conclusion of this review is that the coastal hazard related NZCPS policies need to be changed and added to, if the NZCPS is to be effective in promoting sustainable coastal hazard management in New Zealand in the future.

8.3 Recommendation

It is recommended that the Minister of Conservation invoke sections 53 and 57 of the Resource Management Act to review the NZCPS and enable a Board of Inquiry to consider changes and additions to the policies pertinent to coastal hazard management.

8.3.1 Changes and additions to NZCPS policies

The following is a summary of changes and additions to the coastal hazard related NZCPS policies that are recommended for consideration during a review by a Board of Inquiry (the suggested changes and additions have been set out in the form of draft NZCPS policies in Appendix 15):

1. A vision incorporating:
 - enhanced natural defences;
 - enhanced coastal habitats, coastal ecosystems and beaches (and other natural coastline features), with high value beaches free of protection works; and
 - net reduction in risk to private property.(New policy)

A more fundamental, but less specific, vision statement would be along these lines (taken from the Dahm peer review, 2004): ‘To manage coastal hazards in a manner that will ultimately enable coastal communities to live with natural coastal processes and change, avoiding the need for human intervention with these natural processes.’

2. A requirement for district plans to identify graduated coastal hazard zones, using best available methodologies and climate change information, to be reviewed every five years. (Changed NZCPS 3.4.1 & 3.4.2)
3. A precautionary approach policy specifically for coastal hazard analysis and coastal hazard responses, that acknowledges complexity, accelerating climate change extending well beyond 100 years, and the benefits of any ‘extra’ buffers for public access and natural character. (Applying NZCPS 3.3.1)
4. A requirement for identification, protection and enhancement of natural defences, with a recognition of the role of community based approaches for undertaking such activities. There must be recognition of the effects of seawalls on beaches, as beaches are as important a natural defence as sand dunes. (Changed NZCPS 3.4.1 and 3.4.2)
5. Recognition of the phenomenon of ‘coastal squeeze’ on armoured coastlines with a trend of erosion (and on all coastlines where the seawall has been placed too far seaward). Also recognition of the effects of ‘coastal squeeze’ on coastline values. (New policy)
6. A requirement for plans to include methods to promote community awareness and understanding of coastal hazards, and to build community capacity for and involvement in sustainable coastal hazard management. (New policy)
7. Encouragement of support for detailed local coastal hazard response strategies, with outcomes to be incorporated into district plans as far as possible to ensure implementation and monitoring. (New policy)⁵⁰
8. A requirement that new greenfield subdivision, use and development shall:
 - be located and designed to avoid interference with natural coastal processes and the migration of natural coastal features such as beaches (including as a result of climate change);
 - ensure development setback to avoid such interference for at least 100 years, and provide a Queen’s Chain buffer for at least 100 years;
 - incorporate within an extended setback any significant natural features or cultural features; and
 - protect the natural character of the coastal environment; protect property assets; avoid the demand for protection works now and in the future; and maintain Queen’s Chain values for at least 100 years.(Changed NZCPS 3.4.4 & 3.4.5)

⁵⁰ The four detailed strategies prepared for sites in the Auckland region provide useful examples, along with the draft Wainui Beach strategy.

9. A requirement that plans seek to preserve a network of beaches and other natural coastline features without degraded Queen's Chain and tangata whenua values, so that the needs of future generations to have accessible beaches where they can experience the Kiwi cultural connection to the coastline and sea can be met. Plans would identify a network of beaches and how they are to be protected and restored, taking into account:
- the values of individual beaches and of a network of beaches as a whole;
 - whether there is a trend of erosion;
 - the 'coastal squeeze' effects of property protection works;
 - practicable alternatives for responding to coastal hazard threats to private property; and
 - knowledge and cultural values of tangata whenua.
- (New policy)
10. Where any existing subdivision, use or development is threatened by a coastal hazard, hard property protection works shall be permitted only where they are part of a coherent long-term management strategy that is demonstrated to be the best practicable option for the future. The best practicable option for the future shall be determined by:
- identifying the physically and financially sustainable long-term strategies that are available;
 - evaluating those long-term strategies in terms of the short and long-term effects on both the private property and the natural coastline features;
 - taking into account the finite nature of natural coastline features and the increasing demand for coastline access and recreation from an increasing population;
 - taking into account whether the site is located on one of the network of beaches and other natural coastline features that are to be protected so that the needs of future generations to have accessible beaches with high Queen's chain values can be met;
 - taking into account whether the hard property protection works can be located sufficiently landward to avoid interference with the active beach for the majority of the time; and
 - preparing scenarios for each strategy at 25 year intervals up to 100 years.
- (Changed NZCPS 3.4.6)

The Dahm peer review proposes an alternative detailed policy focused on seawall effects, design and mandatory adoption of alternative approaches.

11. Application of NZCPS policies 3.2.1 and 3.2.2 to coastal hazard management, through:
- a) a requirement that district plans create special planning zones for coastal hazard zones, with specific rules, standards and assessment criteria;
 - b) a requirement that district plans classify all buildings in coastal hazard zones as restricted discretionary to prohibited activities, so that consent can be refused for development that increases hazard risk;
 - c) a requirement that district plans and decisions recognise an increase in coastal hazard risk as an effect in assessments of consent applications of existing use rights under Section 10 of the RMA;

- d) a requirement that district plans and decisions recognise that subdivision, and development that reduces options for future property owners to respond to coastal hazards, have adverse effects;
- e) a requirement that district plans and decisions recognise that the significance of coastal hazard risk will increase for any property that has an increased proportion of land subject to coastal hazards, and/or has reduced scope for relocation of development within the property, as a result of subdivision or new development;
- f) a requirement that district plans seek to avoid an increase in coastal hazard risk through not allowing subdivision and multiple dwellings in coastal hazard zones;
- g) a requirement that district plans seek to avoid an increase in coastal hazard risk through not allowing the re-development of existing development (beyond existing use rights) unless the location, design and commitment to relocate in the event of imminent threat reduces the net coastal hazard risk; and
- h) a requirement that district plans require, as a condition of any development consent granted for a property within a coastal hazard zone, covenants on the title for that property to ensure that the risk is known to prospective purchasers, and that conditions of development are known to prospective purchasers through LIMs and PIMs, and are enforceable.

(Applying NZCPS 3.2.1 and 3.2.2)

12. A requirement that regional and district councils seek integration across Mean High Water Springs (MHWS) through:
 - a regional coastal environment plan, where coastal hazards are a significant regional issue;
 - consistent provisions in regional and district plans to create a seamless process for consent applications for activities in the vicinity of MHWS; and
 - consideration of a transfer of powers and/or regional rules for protection works on land or in the coastal marine area (where there is a regional coastal environment plan).

8.3.2 Summary of other initiatives that could assist in implementation

This section sets out other initiatives that could assist in the implementation of the coastal hazard related NZCPS policies and sustainable coastal hazard management, as identified during the review:

1. Guidance notes

Ensuring a close relationship between the NZCPS and guidance notes such as the *Coastal Hazards and Climate Change Guidance Note* prepared by the NIWA and others and for the New Zealand Climate Change office at the Ministry for the Environment.

2. Building community capacity

This could include:

- Sustainable coastal hazard management education and awareness programmes for coastal communities, councillors, development professionals and others.
- Support for the setting up of coast care groups.
- Coordination between councils, within councils, and between councils and community groups.
- Development of strategies or coastal management plans for long-term responses to coastal hazards in hazard prone localities.
- Special rating districts and funds to support long-term strategies and action plans.

3. Central government assistance

Material assistance to property owners to support sustainable coastal hazard response options, either:

- directly, or
- indirectly as contributions to local government coastal hazard strategy development and/or property owner assistance as part of an integrated strategy.

4. Standardised terminology and/or nomenclature

Research into, or professional association agreement on, clear and consistent terminology for the discipline of sustainable coastal hazard management. (With careful consideration of ‘risk’, and community perceptions of risk.)

5. Research to support policy development and other initiatives

This could include:

- Research focusing on the human dimensions of coastal hazards (rather than the technical dimensions of coastal hazards) to explore options for improving implementation of sustainable coastal hazard management.

This could include social impact and socio-economic research into the effects on the owners of coastal hazard prone property and the wider community of pursuing:

- the option of hard property protection works (particularly where popular beaches are affected);
- the option of managed retreat, alone or along with responses such as beach nourishment that restore Queen’s Chain values;

- the option of relocatable development where liability rests with the property owner; and
 - integrated and comprehensive site-specific strategies that seek buy-in from authorities, property owners and the wider community.
- Monitoring that focuses on policy implementation and management initiatives (rather than on coastal processes).
 - Research into coastal hazard analysis and coastal hazard zone delineation methodologies (including research into definitions for and assessment of ‘risk’, taking account of community perceptions of risk).
 - Research into methodologies for developing detailed strategies or action plans for an integrated response to coastal hazards for particular localities.
 - Research into coastal hazard management and funding regimes in other countries.
 - Public policy and economic policy research into providing targeted community and/or government assistance to property owners affected by coastal hazards, in order to achieve long-term benefits for both private and public assets.
 - Public policy and legal research into the implications of updating the Queen’s Chain concept and ethos to provide for the particular community and/or public interest in the narrow coastal strip spanning MHWS, in the light of coastal hazards and the phenomenon of ‘coastal squeeze’ (including implications for private property rights and, expectations of permanent occupancy, planning horizons, existing use development rights, liability issues).
 - Research into the effects of market forces on management of coastal hazard zones, and the ability of market mechanisms to support or promote sustainable coastal hazard management in New Zealand.

Glossary of Coastal Hazard Management Terms

accommodation strategies	See ‘coastal hazard response strategies’.
adaptation	A term for coastal hazard response strategies involving the adjustment of human systems in response to coastal hazards. It includes altered use of land, market mechanisms, and design to reduce vulnerability. (There are overlaps with ‘retreat’ and ‘accommodate’ strategies). See ‘coastal squeeze’.
coastal hazards	used in this document to refer to natural hazards in the coastal environment.
coastal hazard response strategies	sometimes categorised as: ‘protect’, ‘retreat’ and ‘accommodate’ (adopted by IPCC 2001 from Klein et al, 2000): <ul style="list-style-type: none">○ protect: reduce the risk of the event by decreasing the probability of its occurrence○ retreat: reduce the risk of the event by limiting its potential effects○ accommodate : increase society’s ability to cope with the effects of the event
coastal hazard zones:	‘Extreme risk’, ‘immediate risk’ and ‘current risk’ zones all refer to the area that may be affected by a single series of storms. ‘High risk’, ‘primary risk’, ‘2050 risk’ and ‘primary threat’ zones all refer to the area that may be affected within 50 years (these may incorporate the extreme risk zone). ‘Low risk’, ‘secondary risk’, ‘2100 risk’ and ‘secondary threat’ zones all refer to the area that may be affected within 100 years.
coastal protection area	As applied in the western Bay of Plenty, this means the coastal hazard zones. (In Auckland regional plans, this means areas with special values worthy of protection.)

coastal squeeze	The phenomenon where natural coastal features, habitats and ecosystems will be ‘squeezed’ and ultimately disappear between the waves and an armoured shoreline (ie hard defences) where there is a trend of erosion and/or sea level rise which causes the natural features and shoreline profile to migrate landwards. This phenomenon of beaches disappearing in front of protection works is also sometimes referred to as ‘passive erosion’ or ‘beach profile truncation’. It also occurs where hard defences are placed too far seaward on shorelines in dynamic equilibrium, near the seaward edge of the dynamic shoreline envelope (see Appendix 3).
development setback	An area with development prohibition or controls that incorporates both coastal hazard zones and additional areas to provide for public access, natural character and ecosystem protection, etc.
foreshore	The land between the line of Mean High Water Springs (MHWS) and the line of Mean Low Water Springs (MLWS), ie the land covered and uncovered by the ebb and flow of the tide at mean spring tides.
hard engineering structures	structures such as seawalls and groynes that use hard materials such as rock or concrete or steel (which should be subject to engineering design) – see ‘soft engineering’ structures
managed retreat	Also called ‘planned retreat’. This means preventing future development in coastal hazard zones, and progressively giving up threatened or vulnerable land by moving development away from coastal hazard zones as opportunity arises or as individual assets come under imminent threat. Requiring relocation of buildings as they come under imminent threat is a form of managed retreat.
Mean High Water Springs (MHWS)	The line of MHWS is the water’s edge along the coast at high tide during a mean spring tide, ie the contour line on the land corresponding to the level of the sea surface at high tide during a mean spring tide.
Mean Low Water Springs (MLWS)	The line of MLWS is the water’s edge at low tide during a mean spring tide.
passive erosion	see ‘coastal squeeze’.

property protection works	Used in this document in preference to ‘coastal protection works’ for hard engineering structures such as seawalls, as it more accurately describes their purpose and effects. This is sometimes abbreviated to ‘protection works’.
protection strategies	See ‘coastal hazard response strategies’.
Queen’s Chain values	A shorthand used in this document for ‘public access, amenity values, recreational values, cultural values, natural character, and landscape values’, being the whole set of values that the coastline holds for the wider community in New Zealand.
retreat strategies	See ‘coastal hazard response strategies’.
rock revetment	A seawall of rock boulders. Normally used to refer to engineered rock seawalls with filter layers beneath the rock and adequate toe protection foundations.
seabed	The land seaward of the ‘foreshore’, ie the land seaward of the line of Mean Low Water Springs (MLWS).
setback	See ‘development setback’.
soft engineering	Works such as beach nourishment and dune rebuilding that use soft materials such as sand or cobbles (which should be subject to engineering design). See ‘hard engineering structures’.
sustainable coastal hazard management	Coastal hazard management that promotes sustainable management as set out in Part II of the Resource Management Act.

References

- Acland, J. 2003: *Walking Access in the New Zealand Outdoors*, a report by the Land Access Ministerial Reference Group to the Minister of Agriculture and Forestry.
- Alexander, D. 1993: *Natural Disasters*, Chapter 1 Introduction pp73 – 92.
- Auckland Regional Council, July 2000: *Coastal Hazard Strategy & Coastal Erosion Management Manual*, Auckland Regional Council Technical Publication No. 130.
- Barrow, S. 2002: *Wairapapa Coastal Strategy Technical Report*, a report prepared for Wellington Regional Council.
- Bell, R.G., Hume, T.M., Hicks, D.M. 2001: *Planning for Climate Change Effects on Coastal Margins*, a report prepared for the Ministry for the Environment as part of the New Zealand Climate Change Programme.
- Board of Inquiry 1994: *Report and Recommendations of the Board of Inquiry into the New Zealand Coastal Policy Statement*, a report prepared for the Minister of Conservation.
- Cannon, T. 1994: *Vulnerability Analysis and the Explanation of 'Natural' Disasters*, Chapter 2 pp167 – 175.
- Chapman, S. 2003: *Local Government Climate Change Adaptation Project: Environment Bay of Plenty Coastal Hazards Case Study – Issues, Barriers and Solutions*, prepared by Lawrence Cross & Chapman Consultants for the New Zealand Climate Change Office, Ministry for the Environment.
- Coastline Consultants Ltd 2001: *Coastal Hazards and Management – Hudson's Beach, Manukau Harbour*, a report prepared for the Auckland Regional Council and Franklin District Council.
- Coastline Consultants Ltd 2002: *Browns Bay: Coastal Hazards and Management*, North Shore City Council & Auckland Regional Council.
- Coastline Consultants Ltd 2002: *Muriwai Coastal Hazard Management Strategy*, a report prepared for the Auckland Regional Council and Rodney District Council.
- Comfort, J.A. and Single, M.B. 1995: *Literature Review of the Effects of Seawalls on Beaches*, a report to the Department of Conservation.
- Dahm, J. 2004: *Comment on Report: Review of the New Zealand Coastal Policy Statement 1994 – Coastal Hazards*, Eco Nomos Ltd peer review for the Department of Conservation.
- Department of Conservation 1994: *New Zealand Coastal Policy Statement, 1994*.
- Gibb, J.G. 1978: *The problem of coastal erosion along the "Golden Coast", western Wellington, New Zealand*, Ministry of Works, Water and Soil Technical Publication 10: 20pp
- J.G Gibb and Tonkin & Taylor Ltd. 1997: *Strategic options for sustainable management of the coastal interface along Waihi Beach*, a report prepared for the Western Bay of Plenty District Council.
- Gibb, J. G. 1994: *Sustainable management of the coastal environment administered by the Kapiti Coast District Council*, a report prepared for Kapiti Coast District Council.
- Gibb, J.G. 1998: *A Personal Contribution to Coastal Hazard Risk Assessment in New Zealand*, a report to the Auckland Regional Council.

- Goff, J.R. and Chague-Goff, C. 2001: *Catastrophic events in New Zealand coastal environments*, Department of Conservation Conservation Advisory Science Notes: 333.
- Goff, J.R. and McFadgen, B.G. 2000: *Catastrophic seismic-related events and their impact on prehistoric human occupation, coastal New Zealand*, *Antiquity* 75 (2001): pp155–162.
- Hayes, B.E. 2003: *The law on public access along water margins: companion report to Walking Access in the New Zealand Outdoors*, report to the Minister of Agriculture and Fisheries.
- Healey, T.R. 1993: *Coastal erosion, setback determination, and recommendations for management of the Waihi–Bowentown and Pukehina Beach and dunes*
- Healy, T.R. 1997: *Coastal Hazard Zones: Additional Roles under the RMA 1991*, Combined Australasian Coastal & Ports Conference, Christchurch 1997.
- Healy, T.R. and Dean, R.G. 2000: *Methodology for delineation of coastal hazard zones and development setback for open duned coasts*, *Handbook of Coastal Engineering*, edited by John Herbich, Chapter 19.
- Healy, T.R. 2002: *Enhancing coastal function by sensible setback for open duned coasts*, *Solutions to Coastal Disasters '02*, edited by Ewing and Wallendorf, pp795–807.
- Healy, T.R. 1997: *Peer Review of Strategic Options Report for Waihi Beach*, a report prepared for Western Bay of Plenty District Council.
- Intergovernmental Panel on Climate Change (IPCC) 2001: *Climate Change 2001: Working Group II: Impacts, Adaptation and Vulnerability*.
- Jacobson, M. 1996: *Seawalls: Do they adversely affect beaches? RMA Coast Information Series 4.10*, guidance note for Department of Conservation staff.
- Jacobson, M. 1997: *Resource Management Perspective on Seawalls and their Effects*, Combined Australasian Coastal & Ports Conference, Christchurch 1997.
- Jacobson, M. 2001: *The Realities of Coastal Subdivision and Development*, presentation to the New Zealand Coastal Society, Seminar 2001, Nelson.
- Jacobson, M. and Rennie, H.G. 1991: *Alternatives to Hard Engineering Solutions for Coastal Management Problems: Options Sensitive to Cultural and Environmental Concerns*, 10th Australasian Conference on Coastal and Ocean Engineering, Auckland 1991.
- Kirk, R.M. 1987: *Managing the Coast*, Southern Approaches – Geography in New Zealand pp239–259.
- Komar, P. 1996: *The Erosion of Wainui Beach, Gisborne, a report to the Gisborne District Council*.
- Lumsden, J. 1993: *Seawalls – Do they have a role in coastal management*, Centre for Advanced Engineering.
- Lumsden, J. et al 2003: *Draft Strategies for Managing Coastal Erosion Hazards on the Kapiti Coast*, a report prepared for Kapiti Coast District Council.
- Maplesden, R. and Boffa Miskell Ltd 2000: *Natural Character: Concept Development in New Zealand Law Planning and Policy* – Environment Waikato Technical Report 2000/4.
- National Institute for Water and Atmospheric Research (NIWA), Beca Consultants and DTec Consultants Ltd 2003: *Draft Coastal Hazards and Climate Change Guidance Note*, prepared for the New Zealand Climate Change Office, Ministry for the Environment.

- Nugent, D. and Solomon, M. 1994: *Commentary of the New Zealand Coastal Policy Statement 1994*.
- Patterson, D.C. 1996: *Statement of Evidence of David Charles (Dean) Patterson*, Evidence for the Department of Conservation to the Special Hearing Committee hearing seawall applications for Wainui Beach, Gisborne.
- Rosier, J. 2004: *Independent Review of the New Zealand Coastal Policy Statement 1994*, review for the Minister of Conservation.
- Tonkin & Taylor Ltd 1998: *Omaha Development: Revised Coastal Hazard Assessment*, a report for Boffa Miskell Ltd for the Omaha South Development project.
- Tonkin & Taylor Ltd 2002: *Onetangi Beach Coastal Hazard Management Strategy*, a report prepared for the Auckland Regional Council & Auckland City Council.
- Tonkin & Taylor Ltd 1999: *Waihi Beach Management: Evaluation of Options*, a report prepared for the Western Bay of Plenty District Council.
- Tonkin & Taylor Ltd 1998: *Waihi Beach Coastal Management Options*, a report prepared for the Western Bay of Plenty District Council.
- Tonkin & Taylor Ltd 2002: *Whakatane District Council: Coastal Hazard Analysis*, a report prepared for the Whakatane District Council.
- Young, D. 2002: *Monitoring the Effectiveness of the New Zealand Coastal Policy Statement: Views of Local Government Staff*, an unpublished report prepared for the reviewers of the NZCPS , Department of Conservation.

Coastal hazard related NZCPS policies

- paraphrased to specifically address their role in coastal hazard management

Policy 1.1.1 It is a national priority to preserve natural character by:

- d) taking into account potential effects of coastal hazard responses, both within and outside the immediate location; and
- e) avoiding the cumulative adverse effects of coastal hazard responses.

Policy 1.1.2 It is a national priority for the preservation of natural character to:

- d) protect ecosystems which are unique to the coastal environment and vulnerable to modification including estuaries, coastal wetlands, mangroves, and dunes and their margins from the effects of ‘coastal squeeze’.

Policy 1.1.3 It is a national priority to protect the following features which are essential or important elements of natural character from the effects of coastal hazard responses:

- significant representative examples of each landform which provide the variety in each region;
- the collective characteristics which give the coastal environment its natural character including wild and scenic areas;
- characteristics of special spiritual, historical or cultural significance to Maori; and
- significant places or areas of historic or cultural significance.

Policy 1.1.4 It is a national priority for the preservation of the natural character of the coastal environment to protect the integrity, functioning, and the resilience of the coast environment in terms of:

- a) the dynamic processes and features arising from the natural movement of sediments, water and air.

Coastal hazard related NZCPS policies

- paraphrased to specifically address their role in coastal hazard management

Policy 3.2.1 Policy statements and plans should define what subdivision, use and development would be appropriate in areas subject to coastal hazards.

Policy 3.2.2 Adverse effects of subdivision, use or development in areas subject to coastal hazards should as far as practicable be avoided. Where complete avoidance is not practicable, the adverse effects should be mitigated or remedied to the extent practicable.

Policy 3.3.1 A precautionary approach should be adopted towards the identification of areas subject to coastal hazards, and towards proposed coastal hazard responses, particularly those whose effects are as yet unknown or little understood.

Policy 3.3.2 Local authorities should share information and knowledge gained by them about the coastal environment, particularly where it relates to coast processes or to activities with little known effects.

Policy 3.4.1 Local Authority policy statements and plans should identify areas in the coastal environment where natural hazards exist.

Policy 3.4.2 Policy statements and plans should recognise the possibility of a rise in sea level, and should identify areas which would as a consequence be subject to erosion or inundation. Natural systems which are a natural defence to erosion and/or inundation should be identified and their integrity protected.

Policy 3.4.3 The ability of natural features such as beaches, sand dunes, mangroves, wetlands and barrier islands, to protect subdivision, use or development should be recognised and maintained, and where appropriate, steps should be required to enhance that ability.

Policy 3.4.4 In relation to future subdivision, use and development, policy statements and plans should recognise that some natural features may migrate inland as a result of dynamic coastal processes (including sea level rise).

Policy 3.4.5 New subdivision, use and development should be located and designed that the need for hazard protection works is avoided.

Policy 3.4.6 Where existing subdivision, use or development is threatened by a coastal hazard, coastal protection works should be permitted only where they are the best practicable option for the future. The abandonment or relocation of existing structures should be considered among the options. Where coastal protection works are the best practicable option, they should be located and designed so as to avoid adverse environmental effects to the extent practicable.