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 2 – Appendices

Report prepared for:
The Minister of Conservation

Report prepared by:
Mike Jacobson BSc BE(Hon)

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Review of the New Zealand Coastal Policy Statement – Coastal Hazards

Volume 2 – Appendices

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Prepared by: **Mike Jacobson**
Resource management consultant
WELLINGTON

Feedback is invited on this report and should be directed to:

Denise Young
Conservation Policy Division
Department of Conservation
PO Box 10420
WELLINGTON
Phone: **04 471 3046**
Email: **nzcpsreview@doc.govt.nz**

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Volume 2 – appendices

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Appendix 1

Tables Indicating the Consistency of Plans with the Coastal Hazard Related NZCPS Policies

Key:

✓	There are one or more provisions that have applied the NZCPS policy to the region or district.
✗	The provisions have not applied the NZCPS policy to the region or district.
?	Provisions have only partially, or uncertainly, applied the NZCPS policy to the region or district.
BPO	Best Practicable Option
T&T	Tonkin and Taylor
Env Court	Environmental Court

Table 3.1.1: Bay of Plenty region: Do objectives/policies/rules *give effect* to the NZCPS coastal hazard policies?

New Zealand Coastal Policy Statement	Environment B.O.P. RCEP	Tauranga District Plan	Western B.O.P. District Plan	Whakatane District Plan
3.4: Natural Hazards				
▪ **Policy 3.4.1** Comment:	✓ **hazard identification to appropriate regional level**	✓ **hazard identification undertaken and ongoing**	✓ **hazard identification for all urban areas**	? **detailed T&T hazard identification not yet in plan**
▪ **Policy 3.4.2** Comment:	✓?✓ **hazard identification to appropriate regional level**	?✓✓ **implicit from hazard identification**	?✓✓ **sea level rise in hazard identification, not explicit in policies**	✓?? **general identification of vulnerable areas**
▪ **Policy 3.4.3** Comment:	✓✓ **dune protection, dune care, renourishment**	✓✓ **natural defences to be protected**	✓ **beaches not included**	✓? **no policy of enhancement**
▪ **Policy 3.4.4** Comment:	✗ **not explicit**	✗ **maybe implicit no 'coastal squeeze'**	✓ **'in currently undeveloped areas'**	✗
▪ **Policy 3.4.5** Comment:	✓	✓ **greenfield and infill**	✓	✗ **maybe implicit in Nhaz1 Policy 6**
▪ **Policy 3.4.6** Comment:	✓✓✓	? **implicit in relocation and limited duration?**	✓✓✓ **relocation in rules**	✓

NOTE: Multiple symbols denote whether effect has been given to each part of the NZCPS policy.

Table 3.1.2: Bay of Plenty region: Do the objectives/policies/rules go beyond the NZCPS coastal hazard policies?

New Zealand Coastal Policy Statement	Environment B.O.P. RCEP	Tauranga District Plan	Western B.O.P. District Plan	Whakatane District Plan
3.4: Natural Hazards				
▪ **Policy 3.4.1** Comment:	✓ **detailed provision, standardised methodology**	✓ **graduated zones, ongoing and applicant studies**	✓ **different zones (as a result of Waihi Beach case)**	✗
▪ **Policy 3.4.2** Comment:	✓✓✓ **adopt IPCC, specific policies**	✓?✓ **sea level rise implicit, identify foredune only**	✗	✗
▪ **Policy 3.4.3** Comment:	✓✓ **protect foredunes, cliff vegetation**	? ? **foredune only explicit feature**	✗	✗
▪ **Policy 3.4.4** Comment:	✗ **no explicit recognition**	✗ **no explicit recognition**	✗	✗
▪ **Policy 3.4.5** Comment:	✓ **greenfield & infill, hazard only one part of development setback**	? **implicit in greenfield setback?**	✓ **rules from Waihi Beach case develop concept**	✗
▪ **Policy 3.4.6** Comment:	✓✓✓ **proactive with community reduce net vulnerability**	✗ **not addressed**	✗	✗

NOTE: Multiple symbols denote whether effect has been given to each part of the NZCPS policy.

Table 3.1.3: Bay of Plenty region: Are explanations given for the coastal hazard policies giving effect to NZCPS?

New Zealand Coastal Policy Statement	Environment B.O.P. RCEP	Tauranga District Plan	Western B.O.P. District Plan	Whakatane District Plan
3.4: Natural Hazards				
▪ **Policy 3.4.1** Comment:	✓ **extensive promotion**	✕	✓ **zone justification**	✓ **reasons for intention to undertake hazard identification**
▪ **Policy 3.4.2** Comment:	✓✓✓ **extensive discussion**	? **advance turning to retreat recognised**	✕ **Policy 6 only**	✕
▪ **Policy 3.4.3** Comment:	✓ **brief**	✓	✕ **general policy stands alone**	✕
▪ **Policy 3.4.4** Comment:	✕	✕	✕ **Policy 6 stands alone**	✕
▪ **Policy 3.4.5** Comment:	✓ **extensive**	✕	✕ **Policy 4 stands alone**	✕
▪ **Policy 3.4.6** Comment:	✓ **extensive**	✕	? **recognition of potential effects of seawalls**	✕

NOTE: Multiple symbols denote whether effect has been given to each part of the NZCPS policy.

Table 3.1.4: Bay of Plenty region: Do objectives/policies/rules give effect to other NZCPS policies re hazard effects?

New Zealand Coastal Policy Statement	Environment B.O.P. RCEP	Tauranga District Plan	Western B.O.P. District Plan	Whakatane District Plan
Chapt 1: Natural character				
▪ **Policy 1.1.1 (b) & (c)** **Comment:**	✓? **integrated management, no increase in risk**	✓✕ **not cumulative effects**	?✕ **Policy 3 promotes avoidance or mitigation**	✕
▪ **Policy 1.1.2 (c) & 1.1.3** **Comment:**	?✕ **no 'coastal squeeze', representative not identified**	?? **only foredune**	? **Policy 7 focuses on protecting development**	✕
▪ **Policy 1.1.4 (a)** **Comment:**	✕ **not addressed re hazard response**	? **integrity of natural defences**	✕	✓ **CE1 Policy 1**
Chapt 3: Activities				
▪ **Policy 3.2.1 & 3.2.2** **Comment:**	✓✓ **no risk increase, focus on avoidance**	✓? **graduated hazard areas, unclear 'avoid' objective**	✓✓ **Env Court additions control development, Policy 1 stands alone**	?? **arbitrary setback**
▪ **Policy 3.3.1 & 3.3.2** **Comment:**	✓✓ **precautionary, info sharing**	?✓ **rules – but not explicit, precautionary, does work with EBOP**	✓✓ **recognition and rules**	✓✓ **in absence of hazard identification**

NOTE: Multiple symbols denote whether effect has been given to each policy or part of the NZCPS policy.

Table 3.1.5: Bay of Plenty region: Is there clear articulation of actions/techniques in response to coastal hazards?

New Zealand Coastal Policy Statement	Environment B.O.P. RCEP	Tauranga District Plan	Western B.O.P. District Plan	Whakatane District Plan
3.4: Natural Hazards				
▪ **Policy 3.4.1** **Comment:**	✓ **detailed and proactive**	✗ **little discussion of graduated zones**	✓ **improvement post-Env Court reference**	✗
▪ **Policy 3.4.2** **Comment:**	✓✓✓ **detailed climate change response guidance**	✓ **in relation to foredunes**	? ? ✓ **implicit in hazard identification dunecare**	✗
▪ **Policy 3.4.3** **Comment:**	? ? **brief treatment of natural feature ability/protection**	? ✓ **provision for foredune protection and coast care**	? ? **dune care programmes**	✓ **clear policy of landform retention**
▪ **Policy 3.4.4** **Comment:**	✗ **'coastal squeeze' response implicit only**	✗	? **Policy 6 stands alone**	✗
▪ **Policy 3.4.5** **Comment:**	? **treatment brief only**	✓ **for greenfield and infill**	✗ **Policies 1 and 4 stand alone**	✗
▪ **Policy 3.4.6** **Comment:**	✓ **promote proactive, consultative approach**	✗	✗ **no specific provisions**	✗ **no discussion of alternatives**

NOTE: Multiple symbols denote whether effect has been given to each part of the NZCPS policy.

Table 3.2.1: Auckland Region: Do objectives/policies/rules *give effect* to the NZCPS coastal hazard policies?

New Zealand Coastal Policy Statement	Auckland RPS	Auckland Regional Plan-Coastal	Rodney District Plan
3.4: Natural Hazards			
▪ **Policy 3.4.1** Comment:	? **will undertake research will assist district councils**	✓ **will undertake research, has assisted district councils**	✗
▪ **Policy 3.4.2** Comment:	✓? ? **only sea level rise explicit**	✓?✓ **intention re sea level rise hazard identification signalled**	✗✗✓ **natural systems protected**
▪ **Policy 3.4.3** Comment:	? ? **not explicit for hazard response**	✓✓	✓
▪ **Policy 3.4.4** Comment:	✓	✓ **interpreted along with 3.4.5**	✗
▪ **Policy 3.4.5** Comment:	✓	✓ **addressed repeatedly**	✓ **but no reference to protection works**
▪ **Policy 3.4.6** Comment:	✓✓✓	✓ **in hazards and structures chapters**	?✗? **compared with car body dumping**

NOTE: Multiple symbols denote whether effect has been given to each part of the NZCPS policy.

Table 3.2.2: Auckland Region: Do the objectives/policies/rules *go beyond* the NZCPS coastal hazard policies?

New Zealand Coastal Policy Statement	Auckland RPS	Auckland Regional Plan-Coastal	Rodney District Plan
3.4: Natural Hazards			
▪ **Policy 3.4.1** Comment:	✗	? **strategy assistance to District Councils**	✗
▪ **Policy 3.4.2** Comment:	✗	✓✓? **IPCC role with local variation**	✗
▪ **Policy 3.4.3** Comment:	✗	? ? **no specific policies or care group support**	✗
▪ **Policy 3.4.4** Comment:	✓ **applied to form and location of subdivision**	✓ **combined with Policy 3.4.5**	✗
▪ **Policy 3.4.5** Comment:	✓	? **combined with Policy 3.4.4**	✗
▪ **Policy 3.4.6** Comment:	✓	✓ **protection work avoidance in Coastal Protection Area 1**	✗

NOTE: Multiple symbols denote whether effect has been given to each part of the NZCPS policy.

Table 3.2.3: Auckland Region: Are explanations given for the coastal hazard policies giving effect to NZCPS?

New Zealand Coastal Policy Statement	Auckland RPS	Auckland Regional Plan – Coastal	Rodney District Plan
3.4: Natural Hazards			
▪ **Policy 3.4.1** Comment:	✓	✓	✓
▪ **Policy 3.4.2** Comment:	✓✓✓	✓✓✓	✗
▪ **Policy 3.4.3** Comment:	✓	✓	✓ **extensive**
▪ **Policy 3.4.4** Comment:	✓	✓ **only with sea level rise**	✗
▪ **Policy 3.4.5** Comment:	✓	✓ **policy self explanatory**	? **no explicit reference to protection works**
▪ **Policy 3.4.6** Comment:	✓	✓ **extended explanation and interpretation**	? **explanation of partial approach**

NOTE: Multiple symbols denote whether effect has been given to each part of the NZCPS policy.

Table 3.2.4: Auckland Region: Do objectives/policies/rules give effect to other NZCPS policies re hazard effects?

New Zealand Coastal Policy Statement	Auckland RPS	Auckland Regional Plan-Coastal	Rodney District Plan
Chapt 1: Natural character			
▪ **Policy 1.1.1 (b) & (c)** Comment:	✓? **not explicit for hazard response**	✓✕ **in objective**	?✓ **not explicit for hazard response**
▪ **Policy 1.1.2 (c) & 1.1.3** Comment:	? ? **not explicit for hazard response**	✓✓ **specific reference 21.4.6**	? ? **not explicit for hazard response**
▪ **Policy 1.1.4 (a)** Comment:	? **not explicit for hazard response**	✓	✓
Chapt 3: Activities			
▪ **Policy 3.2.1 & 3.2.2** Comment:	? ? **not explicit for hazard response**	✓✓	✓✓
▪ **Policy 3.3.1 & 3.3.2** Comment:	✓✓ **clear for hazard response**	✓✓	?✕ **only when little information? info sharing not a priority**

NOTE: Multiple symbols denote whether effect has been given to each policy or part of the NZCPS policy.

Table 3.2.5: Auckland Region: Is there clear articulation of actions/techniques in response to coastal hazards?

New Zealand Coastal Policy Statement	Auckland RPS	Auckland Regional Plan – Coastal	Rodney District Plan
3.4: Natural Hazards			
▪ **Policy 3.4.1** Comment:	✗ **no clear priorities on hazard identification**	✓ **works with District Councils**	✗ **decision not to hazard identification not explained**
▪ **Policy 3.4.2** Comment:	✓? ? **for sea level rise only**	✓ **importance of climate change reiterated throughout**	✗ **only for case-by-case assessments**
▪ **Policy 3.4.3** Comment:	? ?	✓? **does not specify explicit policy steps required**	✓✓ **clear policy**
▪ **Policy 3.4.4** Comment:	✓ **from processes including sea level rise**	✓ **but only re sea level rise**	✗
▪ **Policy 3.4.5** Comment:	✓ **in hazards and coastal environment chapters**	✓ **excellent, clear policy and explanations**	? **no clear articulation of hazard response effects**
▪ **Policy 3.4.6** Comment:	✓ **in hazards and coastal environment chapters**	✓ **in coastal hazards and structures chapters**	✗ **policies confusing**

NOTE: Multiple symbols denote whether effect has been given to each part of the NZCPS policy.

Table 3.3.1: Wellington Region: Do objectives/policies/rules *give effect* to the NZCPS coastal hazard policies?

New Zealand Coastal Policy Statement	Greater Wellington RPS	Greater Wellington RCP	Kapiti Coast District Plan	Masterton District Plan
3.4: Natural Hazards				
▪ **Policy 3.4.1** Comment:	✗ **no regional ID of coastal hazards**	✗ **(concerned with coastal marine area only)**	✓ **not updated from 1980**	? **ASCH**
▪ **Policy 3.4.2** Comment:	✓✗✗ **possible sea level rise and need for review**	✓✗✗ **effects outside coastal marine area**	? ?✓ **implicit in hazard identification**	✓?✓
▪ **Policy 3.4.3** Comment:	✗✗	✗✗ **(coastal marine area only)**	✓	?✓
▪ **Policy 3.4.4** Comment:	✗	✗ **(coastal marine area only)**	✗	✗
▪ **Policy 3.4.5** Comment:	✗ **no reference to protection works**	✗ **(coastal marine area only)**	✓ **discourages only, no priority to avoidance**	✗
▪ **Policy 3.4.6** Comment:	✗✗✗ **only brief, general recognition**	? **Policy 6.2.3 for coastal marine area more or less equivalent**	✗✓✗ **not BPO approach status quo where existing walls**	? **risk reduction in areas of high risk**

NOTE: Multiple symbols denote whether effect has been given to each part of the NZCPS policy.

Table 3.3.2: Wellington Region: Do the objectives/policies/rules *go beyond* the NZCPS coastal hazard policies?

New Zealand Coastal Policy Statement	Greater Wellington RPS	Greater Wellington RCP	Kapiti Coast District Plan	Masterton District Plan
3.4: Natural Hazards				
▪ **Policy 3.4.1** Comment:	**?** **tsunami risk discussed**	**×**	**×**	**×**
▪ **Policy 3.4.2** Comment:	**×**	**?**	**×**	**×**
▪ **Policy 3.4.3** Comment:	**×**	**×**	**×**	**×**
▪ **Policy 3.4.4** Comment:	**×**	**×**	**×**	**×**
▪ **Policy 3.4.5** Comment:	**×**	**×**	**×**	**×**
▪ **Policy 3.4.6** Comment:	**×**	**✓** **discourage ad hoc protection works**	**×**	**×**

NOTE: Multiple symbols denote whether effect has been given to each part of the NZCPS policy.

Table 3.3.3: Wellington Region: Are explanations given for the coastal hazard policies giving effect to NZCPS?

New Zealand Coastal Policy Statement	Greater Wellington RPS	Greater Wellington RCP	Kapiti Coast District Plan	Masterton District Plan
3.4: Natural Hazards				
▪ **Policy 3.4.1** Comment:	**?** **explanation of intentions**	**×** **coastal marine area only**	✓	✓
▪ **Policy 3.4.2** Comment:	**×**	**×** **coastal marine area only**	**×**	**×**
▪ **Policy 3.4.3** Comment:	**×**	**×** **coastal marine area only**	**?** **policy stands alone**	✓
▪ **Policy 3.4.4** Comment:	**×**	**×** **coastal marine area only**	**×**	**×**
▪ **Policy 3.4.5** Comment:	**×**	**×** **coastal marine area only**	✓ **explanation not translated into policies**	**×**
▪ **Policy 3.4.6** Comment:	**×**	**×** **coastal marine area only**	✓ **explanation not translated into policies**	**×**

NOTE: Multiple symbols denote whether effect has been given to each part of the NZCPS policy.

Table 3.3.4: Wellington Region: Do objectives/policies/rules give effect to other NZCPS policies re hazard effects?

New Zealand Coastal Policy Statement	Greater Wellington RPS	Greater Wellington RCP	Kapiti Coast District Plan	Masterton District Plan
Chapt 1: Natural character				
▪ **Policy 1.1.1 (b) & (c)** Comment:	**?** **not explicit for coastal hazard management**	**?** **"adverse effects reduced to an acceptable level"**	**✗** **not explicit for coastal hazard management**	**✓✗**
▪ **Policy 1.1.2 (c) & 1.1.3** Comment:	**?** **not explicit for coastal hazard management**	**✗**	**✗** **not explicit for coastal hazard management**	**✗**
▪ **Policy 1.1.4 (a)** Comment:	**?** **only consider effects**	**✗**	**✗** **not explicit for coastal hazard management**	**✓**
Chapt 3: Activities				
▪ **Policy 3.2.1 & 3.2.2** Comment:	**?** **"adverse effects reduced to an acceptable level"**	**?** **"adverse effects reduced to an acceptable level"**	**✗** **relies on s106, mitigation or avoidance**	**✗** **"priority on community protection"**
▪ **Policy 3.3.1 & 3.3.2** Comment:	**✓** **recognise role with information**	**✗** **not explicit for coastal hazard management**	**✗✗** **only implicit in hazard identification**	**?✓** **most activities discretionary, coordinate with GWRC**

NOTE: Multiple symbols denote whether effect has been given to each policy or part of the NZCPS policy.

Table 3.3.5: Wellington Region: Is there clear articulation of actions/techniques in response to coastal hazards?

New Zealand Coastal Policy Statement	Greater Wellington RPS	Greater Wellington RCP	Kapiti Coast District Plan	Masterton District Plan
3.4: Natural Hazards				
▪ **Policy 3.4.1** Comment:	✕	✕	✓	✕ **general with focus on floods**
▪ **Policy 3.4.2** Comment:	✕✕✕	✕	✕✕✕	✕ **general with focus on floods**
▪ **Policy 3.4.3** Comment:	? ?	✕	✓	✕ **general with focus on floods**
▪ **Policy 3.4.4** Comment:	✕	✕	✕	✕
▪ **Policy 3.4.5** Comment:	✕	✕	✕	✕ **general with focus on floods**
▪ **Policy 3.4.6** Comment:	✕	✕	✕	✕

NOTE: Multiple symbols denote whether effect has been given to each part of the NZCPS policy.

Table 4.1: DRAFT plans and/or strategies: Do provisions *give effect* to the NZCPS coastal hazard policies?

New Zealand Coastal Policy Statement	Wairarapa DRAFT Coastal Strategy	Kapiti Coast DRAFT Coastal Hazard Strategy	Whakatane Tonkin & Taylor Management Recommendations	Tauranga DRAFT District Plan – Hazards
3.4: Natural Hazards				
▪ **Policy 3.4.1** Comment:	**?**	**✓** **new assessment**	**✓** **new assessment**	**✓** ***Skinner* assessments**
▪ **Policy 3.4.2** Comment:	**✓✓✓**	**✓✓✓** **esplanade reserves**	**✓✓✓** **control of access**	**✓✓✓** **strong protection of natural defences**
▪ **Policy 3.4.3** Comment:	**✓✓** **coast care support**	**✓?** **action to protect?**	**✓✓** **dune restoration**	**✓✓** **strong protection of natural defences**
▪ **Policy 3.4.4** Comment:	**✕** **no 'coastal squeeze'**	**✕** **no 'coastal squeeze'**	**✕** **no 'coastal squeeze'**	**✕** **maybe implicit, no 'coastal squeeze'**
▪ **Policy 3.4.5** Comment:	**✓**	**?** **"discourage development", no true greenfields policy**	**?** **unclear, probably implicit**	**✓✓** **clear, strong methods**
▪ **Policy 3.4.6** Comment:	**✓✓** **retreat where possible**	**✕??** **encourage/discourage, BPO not fully addressed**	**✕✓?** **focused on avoidance and relocatable buildings**	**✓✓ N/A** **decision made that protection works not BPO**

NOTE: Multiple symbols denote whether effect has been given to each part of the NZCPS policy.

Table 4.2: DRAFT plans and/or strategies: Do the provisions *go beyond* the NZCPS coastal hazard policies?

New Zealand Coastal Policy Statement	Wairarapa DRAFT Coastal Strategy	Kapiti Coast DRAFT Coastal Hazard Strategy	Whakatane Tonkin & Taylor Management Recommendations	Tauranga DRAFT District Plan – Hazards
3.4: Natural Hazards				
▪ **Policy 3.4.1** Comment:	✗	✓ **ongoing investigation**	✓ **ongoing investigation**	✓ **ongoing studies**
▪ **Policy 3.4.2** Comment:	✗	✗	✗	?✓✓ **no built defences to threaten integrity**
▪ **Policy 3.4.3** Comment:	✗	✗	✗	✓✓ **emphasises natural defences**
▪ **Policy 3.4.4** Comment:	✗	✗	✗	✗ **no explicit recognition, confused integrated setback**
▪ **Policy 3.4.5** Comment:	✗	✗	? **unclear greenfield policy**	✓ **guidance on subdivision. specific greenfield setback**
▪ **Policy 3.4.6** Comment:	✓ **purchase alternative land**	? **relocatable to enable alternative**	? **relocatable to enable alternative**	✓✓✓ **limited consent duration, protection works prohibited**

NOTE: Multiple symbols denote whether effect has been given to each part of the NZCPS policy.

Table 4.3: DRAFT plans and/or strategies: Are explanations given for hazard provisions giving effect to NZCPS?

New Zealand Coastal Policy Statement	Wairarapa DRAFT Coastal Strategy	Kapiti Coast DRAFT Coastal Hazard Strategy	Whakatane Tonkin & Taylor Management Recommendations	Tauranga DRAFT District Plan – Hazards
3.4: Natural Hazards				
▪ **Policy 3.4.1** Comment:	✓	✓	✓	✓ **including options**
▪ **Policy 3.4.2** Comment:	✓	✓	✓	**?** **reliance on RCEP**
▪ **Policy 3.4.3** Comment:	✓	✓	✓	✓
▪ **Policy 3.4.4** Comment:	✗	✗	✗	✗
▪ **Policy 3.4.5** Comment:	✓	✗	**?** **avoiding increased risk**	✓ **including for new infill**
▪ **Policy 3.4.6** Comment:	✓	**?** **focus on protecting high value residential**	✓ **retreat in long-term, protection short-term**	✓ **justification for prohibition**

NOTE: Multiple symbols denote whether effect has been given to each part of the NZCPS policy.

Table 4.4: DRAFT plans and/or strategies: Do provisions give effect to other NZCPS policies re hazard effects?

New Zealand Coastal Policy Statement	Wairarapa DRAFT Coastal Strategy	Kapiti Coast DRAFT Coastal Hazard Strategy	Whakatane Tonkin & Taylor Management Recommendations	Tauranga DRAFT District Plan – Hazards
Chapt 1: Natural character				
▪ **Policy 1.1.1 (b) & (c)** Comment:	✓✓ **reduced risk**	✓? 	**N/A** **(outside scope)**	✓ **very strong policies and rules**
▪ **Policy 1.1.2 (c) & 1.1.3** Comment:	?? **'special qualities' but not explicit for hazard management**	✗✗ 	**N/A**	✓? **dune protection, integrated setback?**
▪ **Policy 1.1.4 (a)** Comment:	? **not explicit for hazard management**	? **in discussion only**	**N/A**	✓ **prohibits works that interfere with processes**
Chapt 3: Activities				
▪ **Policy 3.2.1 & 3.2.2** Comment:	✓✓ **somewhat general**	✓✗ **mitigation rather than avoidance**	✓	✓? **clear decision on appropriate uses, unclear wording 6.1.4**
▪ **Policy 3.3.1 & 3.3.2** Comment:	✓✓ **somewhat general**	✗✓ **no explicit precautionary**	✓	✓✓✓ **clear precautionary –many prohibited activities**

NOTE: Multiple symbols denote whether effect has been given to each policy or part of the NZCPS policy.

Table 4.5: DRAFT plans and/or strategies: Is there clear articulation of actions/techniques in response to coastal hazards?

New Zealand Coastal Policy Statement	Wairarapa DRAFT Coastal Strategy	Kapiti Coast DRAFT Coastal Hazard Strategy	Whakatane Tonkin & Taylor Management Recommendations	Tauranga DRAFT District Plan – Hazards
3.4: Natural Hazards				
▪ **Policy 3.4.1** Comment:	✓	✓	✓	✓ ***Skinner* case reference**
▪ **Policy 3.4.2** Comment:	✓	✓	✓	✓✓✓ **clear actions and techniques**
▪ **Policy 3.4.3** Comment:	✓	✓	✓	✓✓ **clear actions and techniques**
▪ **Policy 3.4.4** Comment:	✗	✗	✗	✓ **coastal squeeze prevented by protection prohibition**
▪ **Policy 3.4.5** Comment:	? **not clear on 'coastal squeeze'**	✗	✗	✓ **clear actions and techniques**
▪ **Policy 3.4.6** Comment:	✓	✗	✗	✓ **clear decision on alternative options**

NOTE: Multiple symbols denote whether effect has been given to each part of the NZCPS policy.

Appendix 2

Reports from Related Reviews

***Independent Review of the New Zealand Coastal Policy Statement 1994*, Jo Rosier 2004**

The Independent Review of the New Zealand Coastal Policy Statement 1994 by Dr Jo Rosier, Massey University is the companion to this review. Together the two reviews constitute the independent review commissioned by the Department of Conservation to report to the Minister of Conservation.

The Rosier report covers the review of all matters in the NZCPS other than the coastal hazards issues addressed in this report, and incorporates a summary of the findings of this review.

***Monitoring the Effectiveness of the New Zealand Coastal Policy Statement: Views of Local Government Staff*, Department of Conservation, Unpublished Report, 2002**

This report records the results of 12 focus group workshops held with local government staff to seek early feedback on the effectiveness of the NZCPS and to identify the major issues that needed to be addressed by the independent review of the NZCPS.

***Coastal Hazards and Climate Change – A Guidance Note for Local Government in New Zealand*, August 2003 Draft**

This "Coastal Hazards and Climate Change Guidance Note" is still in draft.

The NZCPS review coincides with the development of this Guidance Note, which was commissioned by the New Zealand Climate Change Office within the Ministry for the Environment, itself part of a large study on the effects of climate change: the New Zealand Climate Change Programme.

The Guidance Note is being prepared by the National Institute of Water and Atmospheric Research (NIWA), Beca Consultants Ltd and DTec Consultants Ltd.

The draft Guidance Note covers not only climate change impacts on coastal hazards, but coastal hazards generally as affected by climate change.

The challenges of coastal hazard management planning for local authorities are laid out in some detail, as is a risk-based decision-making framework. Coastal hazard response options, and some advantages and disadvantages for each response option, are set out and discussed.

The Guidance Note is in accord with the New Zealand Coastal Policy Statement approach to coastal hazard management in adopting or advocating a precautionary approach and a hierarchy of:

1. protect natural defences;
2. avoid, or retreat from, areas of coastal hazard;
3. soft engineering defence works; and
4. hard engineering defence works.

The guidance extends to recommending certain planning and public involvement actions, and identifying planning methods available, but does not extend to guidance on statutory planning provisions.

The Guidance Note is a document that, in its final form, will be an important resource for any person seeking to implement the New Zealand Coastal Policy Statement in relation to coastal hazard management.

The New Zealand Coastal Policy Statement could in future complete the jigsaw by providing:

- *a statutory mandate* for certain information gathering and analysis; methodologies; response options; and dissemination of information for public understanding and buy-in; and
- *statutory requirements* for statutory plan provisions.

It is to be hoped that the Guidance Note and the NZCPS policies pertinent to coastal hazard management will evolve over time towards a close relationship; and that together they will be of practical assistance to regional councils, territorial authorities and decision-makers generally in achieving implemention of sustainable coastal hazard management under the Resource Management Act.

Local Government Climate Change Adaptation Project: *Environment Bay of Plenty Coastal Hazards Case Study – Issues, Barriers and Solutions,* Sarah Chapman, May 2003

This is a report commissioned by the New Zealand Climate Change Office within the Ministry for the Environment (MfE) to feed into the "Coastal Hazards and Climate Change Guidance Note".

This case study project sought to identify the issues, barriers and solutions associated with coastal hazard policy development and implementation. The case study involved Environment Bay of Plenty, Tauranga District Council, and Western Bay of Plenty District Council.

The objective of this brief case study project was to help MfE to target the Coastal Hazard and Climate Change Guidance Note. The findings were also considered to be a starting point for further analysis by the relevant councils to provide a focus for future work programmes.

***Overview of Climate Change Effects and Impacts Assessment Guidance Note*, Ministry for the Environment, 2003**

This Guidance Note is the 'umbrella document' to the "Coastal Hazards and Climate Change Guidance Note", published by the Ministry for the Environment in 2003.

***Walking Access in the New Zealand Outdoors*, Ministry of Agriculture and Forestry, 2003**

This report by the Land Access Ministerial Group addresses concerns over public access, including along the coast. In Section 12, Towards a New Zealand Access Strategy, the report recommends the establishment of an independent access agency, possibly modelled on the New Zealand Walkways Commission. It states:

> *A key function of the agency would be to develop a national access plan to bring focus and coherence to the topic. A national access plan would need to include mechanisms to embrace the ethos of the Queen's Chain. The Group believes that the Queen's Chain is an important institution entrenched in New Zealand's heritage and culture and as such, it should be safeguarded.*
>
> *Submitters to the Group made it abundantly clear that New Zealanders believe strongly that there should be practical and secure (legal) access to and along the nation's waterways, lakes and coastlines as enshrined in the commonly accepted view of the Queen's Chain.*
>
> *Submissions make it quite clear that the Queen's Chain should not be further eroded. Rather, it should be extended to include all beaches, waterways of public interest, and all rivers and streams of a specified size.*

Despite the reference to the Queen's Chain not being further eroded, in the sense of access rights being eroded, there is no attention to the issue of loss of access as a result of erosion, protection works and 'coastal squeeze'.

In Section 11, under the heading of Land Management, it is stated that "legal access is only of benefit to recreational users if it is supported by ongoing management of land to ensure that the accessway is maintained (e.g. that structures such as bridges are safe, and that weeds, slips, etc do not block the access)", with no reference to land management in coastal hazard areas to avoid loss of access through 'coastal squeeze' and construction of property protection works.

***Coastal Hazard Strategy and Coastal Erosion Management Manual*, July 2000, ARC Technical Publication No. 130**

This report is included here primarily for reference.

The report is focused on the Auckland region, but is a useful reference and resource document for New Zealand generally. It compares the hazard identification methodologies of the leading New Zealand practitioners, as well as providing a framework for coastal hazard response strategies (akin to the Coastal Hazard and Climate Change Guidance Note above).

Appendix 3:

The Particular Challenges for Coastal Hazard Management Policy

The initial preparation by the author for the detailed analysis of plans and consents indicated a need to establish a context and conceptual framework for this review of the effectiveness of NZCPS coastal hazard policies.

That initial preparation involved looking for the underlying issues and barriers faced by coastal hazard policies, as revealed by the NZCPS policies themselves, by the consultation with Council staff, by a review of the literature on coastal hazard management, and by the author's own experience in central and local government.

Inevitably, this context and conceptual framework has been subject to re-examination during the review, in the light of the plans and consents studied and the reference material discovered and read in the course of the review.

The primary underlying issues and barriers that coastal hazard policies must address are elaborated on in this Appendix.

Natural coastal processes vs coastal hazards

The first coastal hazard dilemma facing coastal hazard policy is that planners and decision makers are tasked with both:

- protecting the natural coastal processes that create and maintain natural features and their natural character; and
- protecting people and property from coastal hazards.

But the coastal hazards of sea and wind erosion, inundation by the sea, and coastal cliff collapse *are* the same natural coastal processes that create and maintain natural features and their natural character. This fundamental issue is well expressed, for example, in the Auckland Regional Council and Environment Bay of Plenty policies and plans:

In themselves, these [natural] hazards are simply natural events, and it is only the presence of people which turn such events into hazards.[1]

Coastal processes are a part of the natural character of the dynamic coastal environment. Natural hazards arise from the interaction of such processes with human use, property, or infrastructure.[2]

This leads to the apparent dilemma (expressed in alternate ways):

- Are planners and decision-makers being asked to protect coastal hazards? or
- Are planners and decision-makers being asked to protect the community from natural character?

[1] *Bay of Plenty Regional Policy Statement*, Overview Chapter 2.4 Natural Hazards.
[2] *Auckland Regional Plan: Coastal*, Chapter 21 Natural Coastal Hazards.

Clearly, planners and decision-makers are not being asked to do these things under a sustainable coastal hazard management regime. However, the evidence is clear that property owners who have suffered damage, or face imminent damage, from coastal hazards have no patience with such sophistry. The current status of community awareness, and perceptions of coastal hazards and coastal hazard management, is such that property owners simply want action to protect them and their community from this enemy called 'coastal hazards', this terrible invader and destroyer of their homes and property.

When coastal hazard events do happen, it is a traumatic event for affected property owners. The property owner experiences some mixture of shock, incredulity, fear, violation, financial worry and dislocation. This is closely followed by a natural response of seeking to repel this terrible invader, and to find someone who is accountable for this terrible damage to their home and castle.

In the face of such a compelling request for immediate protection by property owners, what are planners and decision-makers to make of general policies that seek to protect the integrity of dynamic natural coastal processes and the public good values along the coastal strip, and of other general policies that seek to protect communities from coastal hazards, both of which are admirable policies?

The positive and negative effects of seawalls

The second coastal hazard dilemma relates to 'coastal protection works'. The instinctive response to the natural coastal process (or coastal hazard invader) called coastal erosion, is to achieve immediate protection by repelling the invader with hard engineering works such as seawalls. This is also traditionally the most common response.

Unfortunately, awareness and understanding of the effects of hard engineering works is still not widespread. The apparent dilemma is:

- Do 'coastal protection works' such as seawalls protect the coast and stop erosion? or
- Do 'coastal protection works' such as seawalls degrade the coast and increase erosion?

The answer is that seawalls which do not fail 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, possibly along the coast 'downstream' from the wall.

Seawalls that do fail have little effect on erosion. When a seawall is overtopped or breached by a larger-than-design storm (or because of poor design or maintenance), the shoreline will rapidly retreat to the position it would have had if the seawall had never been built.

Where seawalls successfully armour the backshore, erosion of the beach and foreshore in front of the wall continues unabated, or is accelerated (the sand that would normally nourish the beach is trapped behind the seawall). This is because the underlying cause of the erosion (sediment deficit or sediment transport process) is not changed by the construction of the seawall.

(The traditional concern over accelerated erosion of beaches from wave reflection is somewhat displaced and can distract attention from the more substantive effects of passive erosion on beaches[3]. The scour from wave reflection during wave attack is of more concern to the integrity of the structure, which may have its foundations undermined. While some extra sand may be entrained and lost from the beach as a result of the scouring, most of the scoured sand will return after the storm, courtesy of the smaller waves transporting it landward.[4])

The effect of the ongoing erosion is that the beach profile moves back and forth as if the wall was not there. When there is a long term trend of erosion and the coastline is in retreat, the beach profile moves steadily landward. This is more easily visualised as the seawall marching down the beach: the beach will get narrower and narrower, and lower and lower, until ultimately the seawall is in the waves even at low tide, and there is no beach. This is called 'passive erosion', or 'beach profile truncation'.[5]

('Passive erosion' is not the result of poor design or wave reflection. It will happen, regardless of the design, for any seawall or other protection work that successfully armours the shoreline and stops the free interchange of sand between the foredune and the beach.)

On a retreating soft coastline without a seawall, the natural features of foreshore, beach, dune, inter-dune wetlands, estuaries, etc. will simply 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 as described above for a beach. This is called 'coastal squeeze'[6].

'Coastal squeeze' is a particular issue for retreating coastlines. For coastlines in dynamic equilibrium with seawalls, beaches and dunes will both come and go over time. As pointed out by Dahm (2004)[7] 'coastal squeeze' adverse effects will occur (and frequently do occur in New Zealand) when seawalls are placed too far seaward, near to the seaward edge of the dynamic shoreline envelope.

The occurrence of 'coastal squeeze' will narrow the coastal strip between sea and development, and will add to any adverse effects from the construction of the protection works on the coastal values that make the coast such a special place for New Zealanders.

Therefore, 'coastal protection works' do not protect the coast: They may protect property and development ('property protection works'), but they will also degrade natural coastal values,

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[3] See for example: *Seawalls: Do they adversely affect beaches?*, Mike Jacobson 1996 – a guidance note for Department of Conservation staff (in the RMA Coast Information Series 4.10) to introduce staff to the expert evidence prepared for the Wainui Beach litigation; and *Seawalls – Do they have a role in coastal management*, John Lumsden 1993, which does not consider passive erosion, and finds the adverse effects of seawalls unproven.

[4] See for example: *Literature Review of the Effects of Seawalls on Beaches – A Report to the Department of Conservation*, Comfort & Single 1995, commissioned to promote a better understanding of the effects of seawalls in the light of the NZCPS coastal hazard policies.

[5] See for example: The statement of evidence … Wainui Beach, Dean Patterson 1992; and "Resource management perspective on seawalls and their effects", Mike Jacobson 1997

[6] Bijlsma et al 1996; IPCC 2001

[7] See the peer review by Jim Dahm of this report: *Comment on Report*…. Dahm 2004

especially where there is a long-term trend of erosion, unless some active management is undertaken to protect the public good asset of the beach (such as beach nourishment in front of the property protection works).

Public good vs private good

In the light of the 'coastal squeeze' effects of seawalls, the tension between the private good of protecting private property and the public good of protecting natural coastal features (such as beaches) and their amenity values should be at the core of the assessment of coastal hazard response options.

However, the value of the public goods along the coast has traditionally been undervalued and/or the adverse effects of traditional 'coastal protection works' on public goods (as described above) not taken into account or not fully understood.

Short term cost vs long term benefit

Even where the value of public goods such as beaches are taken into account, and the adverse effects of seawalls are understood, a powerful barrier to a sustainable mix of response options can be cost.

Often the issue is not just cost, but the problem of weighing short term costs and benefits against long term costs and benefits.

The cost of designing and constructing adequate seawalls is often unpalatable to property owners or communities despite the probability of inadequate seawall failure over the longer term[8].

Even more unpalatable again are the costs of options involving retreat or active management. Relocating residential development has a high initial cost to avoid a likely, but not certain, future disbenefit (private loss of property assets, and public loss of a beach). Similarly the cost of beach nourishment or sand bypassing will generally have a higher initial cost than a basic seawall, and appears less permanent and trustworthy than a solid rock seawall.

Analysis and perceptions of hazard, vulnerability and risk

There is an inherent uncertainty over coastal process behaviour and hazard events over a time scale of decades. This natural dynamic system uncertainty creates uncertainty in quantifying the longer term benefits (or avoidance of long term disbenefits) of coastal hazard responses for individual sites or for sections of coastline.

Expert evidence at Environment Court hearings[9] makes it clear that there is as yet no clear consensus even over the approach to be taken in assessing hazard probability and acceptable risk (although the Court has been able to forge a resolution seen by the Court as prudent and/or practical, and usually representing a compromise position as between the expert evidence).

[8] For example, see the case studies in this review that examine the Wainui Beach (Gisborne) and Raumati (Kapiti) seawalls.

[9] For example, Skinner v Tauranga District Council A163/2002; and New Zealand Cashflow Control Ltd v Christchurch City Council C60/2003.

Coastal hazard threats and appropriate responses are also sometimes analysed in terms of addressing the vulnerability of development that may be affected.

Both coastal hazard policies and decision-makers have to grapple with this objective uncertainty over hazard probability, vulnerability, and acceptable risk.

Perhaps equally important, however, is the further issue of risk perception.

The analysis of hazard and risk and vulnerability, and taking account of risk perception, are fertile fields for study.[10]

Of immediate concern for coastal hazard policies is the reluctance of property owners to accept the existence of hazards; to accept the reality of 'coastal squeeze' effects on public good values along eroding coastlines; and to change perceptions over the risks associated with different response options.

It is demonstrable at many coastal sites in New Zealand that seawalls have failed to provide an adequate level of protection from hazard for private property. Yet, there remains an unshakeable trust in seawalls that is not matched by a trust in beach nourishment or managed retreat of assets, even in the face of evidence of lower cost or higher protection from hazards.[11]

Climate change effects

A special new factor that compounds the above difficulties 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 of storms.

The draft Guidance Note on Coastal Hazards and Climate Change reinforces that climate change is definitely occurring, and that the change is rapid and attributable to human activity. An increasing confidence in the predictions of climate change effects is reported.

In other words, there is considerable confidence that coastal hazards will increase.

Apart from the general change in *degree* of the severity of erosion, inundation and cliff collapse, a particular concern is the change in *the nature* of coastal erosion and *the occurrence* of coastal and rivermouth flooding.

Many coastlines that are currently in a state of dynamic equilibrium will switch to a state of retreat (a trend of long-term erosion), and other coastlines not susceptible to seawater inundation and associated freshwater flooding near rivermouths will become prone to such flooding.

As discussed above, a long-term erosion trend and a 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.

[10] For example, the *Natural Disasters* overview by David Alexander, 1993; and *Vulnerability Analysis and the explanation of 'Natural' Disasters'* , Terry Cannon 1994.

[11] For example, Wainui Beach reviewed in this document; and South Brighton Spit as reported by Kirk 1987 in "Managing the Coast" on p244 of *Southern Approaches.*

Increased coastal hazards will also increase the costs for property owners and communities of attempting to maintain property protection works along the coast.

Towards sustainable coastal hazard management planning

While there will generally be no easy solutions once coastal hazard situations arise, the discipline of coastal hazard management planning has made substantial strides since the early 1980's.

The challenge appears to be primarily one of applying and implementing coastal hazard management approaches already substantially developed. Amongst other practitioners, Healy, Kirk and Gibb have developed and advocated integrated, multi-option approaches for many years[12].

As an example, in 1987 prior to the existence of the NZCPS, Kirk discussed the need for a carefully considered approach to coastal management that goes beyond simply constructing protection works or, alternatively, simply delineating hazard zones. Kirk promoted an approach that takes full account of the adverse effects of 'coastal protection works' on beaches, of the public good value of beaches, and of the need for active management of the coastal strip (such as dune protection, beach nourishment and sand bypassing), in an integrated and multi-option approach to sustainable coastal management.

It is clear that, as forcefully stated by Kirk (1987), 'greater physical understanding of our coast will contribute to management but will not, of itself, ensure better care of the coast'. Coastal hazard management is a complex discipline that requires very clear and specific policies with statutory force if confusion is to be avoided and implementation promoted.

(While coastal hazard policies must very specifically address the particular challenges of coastal hazard management, the aim of properly addressing those particular challenges is to contribute to the integrated and sustainable management of the coastal environment as a whole, including built resources, natural resources such as beaches and coastal ecosystems, natural character, amenity values, heritage, access, etc.)[13]

The conclusion from the above discussion is that there is a difference between managing coastal hazard responses and managing other activities in the coastal environment, and that coastal hazard management planning is a very specific field of endeavour, requiring a multi-disciplinary approach searching for an integrated response involving a combination of response options.

The conclusion from the above analysis is also that practitioners consider a national policy for sustainable coastal hazard management should clearly address these underlying issues and barriers by promoting a knowledge-based and integrated approach to coastal hazard management. Such an integrated approach would ideally use skilled practitioners from a range of disciplines (including planners, engineers, geographers, geologists, economists and social scientists) to seek solutions that are responsive to local conditions and that involve a mix of response options to achieve:

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[12] See for example: "Methodology for delineation of coastal hazard zones and development setback…", Healy and Dean 2000; "Managing the Coast" – chapter by Robert Kirk in *Southern Approaches – Geography in New Zealand,* 1987 ; *A personal contribution to coastal hazard risk assessment in New Zealand*, Jeremy Gibb 1998; or the summary of methodologies developed in New Zealand in *Coastal Hazard Strategy*, Auckland Regional Council 2000.

[13] Terry Healy in particular has advocated the use of integrated development setbacks that provide for protection of access, special cultural sites, natural character etc. See for example "Coastal Hazard Zones – Additional Roles under the RMA 1991", Healy 1997; and "Enhancing coastal function by sensible setback for open duned coasts", Healy 2002.

- *avoidance:* involving keeping, or moving, uses with an expectation of permanence away from areas prone to coastal hazards (including an allowance for the future migration inland of the shoreline and coastal features, increasing community awareness of coastal hazards, and changing community perceptions about coastal hazard management)

- *active management of coastal resources:* involving active protection and enhancement of coastal features that have public good values and that also provide a buffer protecting private goods and public infrastructure from coastal hazards (eg. dune enhancement, beach nourishment, or sand bypassing)[14]

- *protection:* involving, ideally, protection works that protect both private property and public good values at the target site ('soft engineering protection works' such as beach nourishment or, sometimes, groynes) and that do not create or exacerbate coastal hazards to private property and public good values elsewhere along the coast; or, as a last resort, protection works that protect the private property at the target site while accepting, but minimising, adverse effects to public good values and other private property ('hard engineering protection works' such as seawalls).

The coastal hazard related NZCPS policies address all these response options, albeit briefly and without explanation or elaboration, and this review seeks to assess the effectiveness of the NZCPS in addressing the issues identified by Kirk, Gibb, Healy and others during the 1980s and early 1990s, and in promoting the new statutory goal of sustainable management as introduced in 1991 by Part II of the Resource Management Act.

[14] Active management is strongly advocated by Kirk in his 1987 "Managing the Coast", and by Healy in his submission to the NZCPS review 2003, where he proposes a requirement for beach nourishment when seawalls are constructed, in order to avoid the loss of beaches.

BBC News
British beaches 'gone within 100 years'

By Helen Briggs
BBC News Online science reporter

Summers spent building sandcastles on the beach will be a distant memory by the end of the century.

Climate change is changing the face of the British coastline, eroding beaches and marshes.

Conservationists warn that If nothing is done, holiday beaches may be lost within 100 years along with habitat that shelters wildlife.

International experts are meeting In London on Wednesday to discuss ways to protect the UK's coastal assets.

It depends on working with nature rather then against it, say experts from "Living with the Sea", a four-year European partnership headed by English Nature.

"For many centuries we've over-engineered our coast and now in the face of unstoppable sea level rise we have to think of all coastal management options", says Stephen Worrall of Living with the Sea.

"We have to work with nature and not fight nature on the coast.
"It means allowing the sea back into some of the undeveloped frontage such as farmland",

Hard Engineering
Living with the Sea says a rise in sea levels driven by climate change has already altered the coastal landscape around the UK. (The south of England is of particular concern because it has been gradually sinking compared with the north since the last ice age).

Resorts like Wemouyth in Dorset have been robbed of sand while vast tracts of salt marsh have disappeared in counties such as Essex.

It appears that concrete and steel defences put up to protect land from erosion and flooding are putting beaches and other marine environments under pressure.

Sand dunes and marshes naturally shift inland as sea levels rise but are unable to do so if they meet a hard barrier.

These "hard-engineering" solutions could radically change the appearance of beaches for future generations: impoverishing coastal wildlife, says the partnership (which also includes the Environment Agency and the Department for Environment, Food and Rural Affairs).

Restoring habitat
The habitat of the two million water birds that spend the winter In the UK is at risk, says the Royal Society for the Protection of Birds (RSPB).

"There will come a time when If you don't give way to the sea you will be left with a huge problem", says

spokesman Grahame Madge.

"You have to recreate these habitats inland if you're to protect them."
The RSPB says it is possible to restore inter-tidal habitat by resetting sea defenses, as a pilot scheme at Freiston Shore Nature reserve In Lincolnshire has shown.

A flood defence was erected inland and the sea was allowed to breach the original sea wall, allowing birds and other wildlife to thrive.

Story from BBC NEWS: http://news.bbc.co.uk/go/pr/fr//1/vhl/|/teWao|3g|l.s|
Published: 2003/07/21 23:47:08 GMT

Appendix 4

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): o protect: reduce the risk of the event by decreasing the probability of its occurrence o retreat: reduce the risk of the event by limiting its potential effects o 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.

Appendix 5

A Discussion of the Methodology

The case study approach

Case study review methodologies, such as used here, 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. Therefore this methodology was preferred to the more generalised options of using randomly distributed questionnaire surveys or keyword searches in a random sample of policy statements, plans and consents with a coastal hazard content.

The case study approach used by Dr Jo Rosier for the NZCPS full 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.

In addition, during the review it became apparent that many councils could not readily provide comprehensive lists (and hence random samples) of consents with a coastal hazard content. On the other hand, the consents that reached the Environment Court, or otherwise achieved prominence amongst coastal hazard practitioners, provided a source of case studies that revealed the common themes and management approaches in the districts and regions selected.

The Auckland, Bay of Plenty and greater Wellington regions were selected as case study regions for this review. Auckland and Bay of Plenty regions were also examined by Dr Rosier in her review, along with Southland. Greater Wellington region was selected for this review in place of Southland for two reasons: it would complete the spectrum of types of coastal hazards and coastal development (with case study material readily accessed by the reviewer), and it would make better use of the time and resources available to the Wellington-based reviewer.

The consent process for a seawall at Wainui Beach is also used as a case study for review as it is prominent in terms of Court decisions and associated detailed research and evidence. It is also a comprehensive example addressing the many common themes of historical hazard responses and present conflict over hazard response options on a popular eroding beach that has become increasingly developed.

Quantitative vs qualitative assessment

Examination of the subordinate planning instruments in the case study regions and districts was at the core of this research. The comparison tables (and more detailed analysis contained in this volume) of the case study regional and district plans, provide a largely quantitive measure of the effect of the NZCPS in introducing a range of provisions that are 'not inconsistent' with the coastal hazard related NZCPS policies.[1]

However, a more qualitative measure has also been attempted. This was to assess how well the NZCPS policies have been applied and developed to meet the particular circumstances in each region or district, in order to achieve sustainable coastal hazard management as promoted in to by the coastal hazard related NZCPS policies. This assessment was reported in the narrative summary contained in the main report.

Another qualitative measure attempted in this review was the assessment of how effectively the policies and rules in the subordinate instruments have been translated into action through consent decisions and development of community hazard management responses.

The assessment of whether a consent decision (or the reasons for a decision) is consistent with a policy is itself fraught with hazard. A fundamental principle of administrative law is that a decision-maker cannot apply a policy so rigidly as to exclude the merits of an individual case. This review cannot 'second-guess' all the reasons for, or weighing of factors in, making a decision – it can only seek to gain some insights from the application documentation, the evidence of parties, and the reasons given for the decision.

The views and experiences of council officers and of developers are also important for assessing the effectiveness of the coastal hazard related NZCPS policies. This reflects a simple truth known to all consent officers and many applicants: the consent processes recorded in council files do not fully reflect the effectiveness of plan provisions and the policies that have guided their development. District plan provisions, backed up by the mandate of higher level policies, as read by (or explained to) property owners or development professionals, also have their effect outside the formal consent process. This occurs as proposals for development in hazard prone areas are modified, relocated or abandoned in response to information conveyed by coastal hazard policies and council staff.

It also needs to be recognised, however, that controversial proposals pursued as notified applications have a disproportionate effect on the future actions of all stakeholders, and ultimately on the review of policy and legislation. This is particularly the case where appeals place issues in front of the Courts, and the Courts interpret policy and contribute to the body of case law with their judgments.

[1] While the Resource Management Amendment Act 2003 has introduced a new criterion of consistency for subordinate planning instruments, all plans and consents examined pre-dated that amendment. However, any changes to NZCPS policies will have to take account of the new relationship between the NZCPS and subordinate instruments.

Peer review

An important part of a case study methodology involving non-random selection of case study areas and consents (particularly in the case of a reviewer who has had closer involvement in coastal hazard planning and consents in one part of the country than in others, and who was peripheral to the preparation of the document under review), is the process of peer review. This can establish the rigour of the methodology, the comprehensive coverage of the issues, and the balance of the case study selection and findings.

The two peer reviews of this review were prepared: by Dr Hamish Rennie, a partner in Eclectic Energy and lecturer in geography at Waikato University (who was also a peer reviewer of Dr Rosier's general NZCPS review); and Jim Dahm of Eco Nomos Ltd, formerly of Environment Waikato, and who has many years experience of assessing coastal hazard response options and assisting community based coastal enhancement groups.

The Rennie peer review proposed three matters that have not been addressed in the final report:

- The inclusion of coastal hazards related to human health and safety during coastal recreation, such as rip currents and poor water quality. This was outside the scope of the brief for the reviewer, and also outside the scope of the existing natural hazard policies in the NZCPS. This represents a whole new area that the Department of Conservation may wish to investigate when considering the scope of any changed NZCPS.

- A review of section 32 of the Resource Management Act analyses the options for coastal hazard provisions, as part of the review of the case study of policy statements and plans. The reviewer considers that the review of section 32 analyses would, or should, provide some insights into the consistency or otherwise of policy statements and plans with the coastal hazard related NZCPS policies, but undertaking that review was outside the time and resources available. An analysis of submissions on draft and/or proposed plans, and of the councils' section 32 analyses, could be the subject of a separate research project.

- A review of another case study region where the regional council has prepared a Regional Coastal Plan rather than a Regional Coastal Environment Plan, in order to present a more comprehensive picture of the difference (if any) in outcomes. The reviewer again agrees that that would be a useful addition to the review. The importance of this distinction did not become apparent until well into the review and, again, undertaking such a substantial additional review was outside the time and resources available. (It is noted that the other peer reviewer, Jim Dahm, also questioned the reviewer's conclusion that Regional Coastal Environment Plan preparation should be strongly encouraged, on the basis that Mr Dahm considers that the Regional Policy Statement should be able to achieve the same integration, albeit less readily. He pointed to what has been achieved by Environment Waikato with its Regional Policy Statement and Regional Coastal Plan.) Again, this could be the subject of a further research project – there are seven Regional Coastal Environment Plans and ten Regional Coastal Plans in New Zealand.

The Dahm peer review (Dahm 2004) largely supports the methodology, coverage and findings of this review. It brings some different and additional perspectives and approaches to the coastal hazard management issues identified in the review and to the detail and focus of suggested changes to coastal

hazard policies in the NZCPS. The 23 page Dahm peer review report remains as an important companion document to this review.

The Dahm peer review proposed, in particular:

- More directive policies to better ensure implementation.
- The inclusion of timelines in policies to ensure timely implementation.
- Recognition of the advantages of community based approaches to the management of natural buffers, and the need for increased community awareness and involvement in coastal hazard management generally, as a higher priority than technocratic initiatives if sustainable management is to be advanced.
- Recognition of the 'coastal squeeze' adverse effects of many seawalls even on beaches in dynamic equilibrium because of their placement too far seaward near the seaward edge of the dynamic shoreline envelope.
- Recognition that Regional Policy Statements should be able to achieve the necessary integrated management of coastal hazards throughout the coastal environment, where the regional council has already chosen to prepare a Regional Coastal Plan rather than a Regional Coastal Environment Plan.
- The protection and conservation of sand reserves as a crucial natural buffer and future source for beach nourishment. This was reported as a key element in overseas strategies, eg California and Florida, USA.

The first five of the above matters have been addressed in the final report. The sixth and final matter relating to sand reserves was not researched for this report. It should be covered to some extent by the more general policies protecting natural buffers, but an examination of sand extraction from active deposits in New Zealand is required. Further consultation during a review of the NZCPS may find that a specific policy is warranted.

Information in the report, appendices, and source material files

Because of the necessarily largely qualitative nature of this review, as outlined above, it was considered essential to provide in this volume enough detail of plans and consent processes to at least give the 'flavour' of the case study content and to give readers the opportunity to look behind the assessment of the reviewer.

The inclusion of material from the case studies in appendices and Department of Conservation files also serves the secondary objective of this review, which is to make use of the research undertaken to present resources to the Department of Conservation, the Board of Inquiry, and to those who will wish to make submissions to the Board of Inquiry.

Which NZCPS policies are examined?

The coastal hazard related NZCPS policies that were selected to be followed through the cascade of policies, plans and consents were those that:

- dealt with coastal hazards and coastal hazard responses directly;
- related to a precautionary approach given the uncertainties over coastal hazards into the future;
- related to protecting natural coastal processes and natural features; and
- related to managing effects, given the potential effects of hazard responses including hard property protection works.

Tabulation of plan provision consistency

An important element of the review is the tables presenting an analysis of the degree to which individual plans and policy statements are consistent with the individual NZCPS policies.

The widely differing content and styles of each policy statement and plan make the decision 'Do the provisions singly or severally give effect to NZCPS hatural hazard policy X?' difficult to reduce to a simple Yes or No answer for the Tables. Nevertheless, the tables give a useful check on consistency with the relevant policies, if not a precise account of what each policy statement or plan has achieved.

Reading the narrative assessment of policy statements and plans in the report or the relevant appendix in conjunction with the tables will give a fairer overall picture of each policy statement and plan.

Analysis of Environment Court judgments, draft plan provisions and strategies

A strict adherence to assessing the effect of the NZCPS on all subordinate planning instruments would focus entirely on those instruments which were operative or near operative. However, the reviewer's desire to take a forward looking approach, plus a recognition of the evolving, and far from settled, state of policy statements and plans, have led this reviewer to report also on draft plan provisions and strategies that are intended to feed into plan changes.

Environment Court decisions on district plan references are also considered as they are akin to consent decisions in interpreting and applying NZCPS policies in relation to coastal hazards, and have a significant authority that warrants careful consideration.

Appendix 6

Analysis of the Policy Statement and Plans in the Bay of Plenty Region

This appendix supports section 3.1.2 in the main report. It contains a more detailed analysis of the coastal hazard related provisions in the:

- Bay of Plenty Regional Policy Statement;
- Bay of Plenty Regional Coastal Environment Plan;
- Tauranga District Plan (and Environment Court reference);
- Western Bay of Plenty District Plan (and Environment Court reference); and
- Whakatane District Plan.

Bay of Plenty Regional Policy Statement

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

Section 9: The Coastal Environment draws attention to the important role of the Regional Coastal Environment Plan:

> *At the regional level there are two mechanisms for managing the coastal environment: the Statement and the Regional Coastal Environment Plan. The latter explicitly provides for the effective management of the coastal environment…*

The Regional Policy Statement provides a general overview version of the provisions in the Regional Coastal Environment Plan.

Section 9: The Coastal Environment identifies the issues of development in areas "very susceptible" to storm induced erosion or flooding; acceleration of beach and dune erosion by inappropriate activities in sensitive dune and beach environments; and increased coastal erosion and inundation risks from climate change.

Section 11: Natural Hazards elaborates on the concept of risk as a combination of the probability of the hazard and the vulnerability of human infrastructure. The summary of natural hazards includes coastal erosion, tsunami and climate change.

Section 11.2: Natural Hazard Issues includes:

- *Insufficient community awareness and understanding of the significance of natural hazards hinders the avoidance and mitigation of those hazards.*

- *Hazard mitigation works can adversely affect ecosystems, amenity values and the natural character of the environment.*

- *The impacts of climate change on the natural hazards of the region are uncertain.*

- *The avoidance and mitigation of natural hazards through appropriate land use planning is very limited.*

- *Natural hazard mitigation works can … have the … adverse effects [of] high cost…, [unrealistic] expectations of protection…, and encouraging further development and consequent increasing vulnerability…*

Section 11.3: Objectives, Policies and Methods includes a substantial number of policies that apply to coastal hazards as well as river flooding and other hazards, and that are picked up and stated more specifically for coastal hazard management in the Regional Coastal Environment Plan.

Notably, however, NZCPS Policy 3.4.4 (that natural features may migrate inland) is fully stated as 11.3.1(b)(xv), but is not carried over into the Regional Coastal Environment Plan and elaborated for this region.

Notable also is the policy that new development within existing settlements at risk from natural hazards "shall not result in increased vulnerability, and should aim to reduce net vulnerability over time." (This was translated in the later Regional Coastal Environment Plan as "no net increase in risk" for coastal hazard management.)

In Section 11.3.1(c) Methods of Implementation there is an extensive list of ways in which Environment Bay of Plenty will seek to cooperate with district councils to improve implementation of the policies, many of which are applicable to coastal hazard management. There is also an extensive list of tasks for Environment Bay of Plenty itself including, for coastal hazard management, identifying regionally significant natural hazards in a register or in regional plans, and liaising with district councils on future research matters.

Section 11.3.1(d) Explanation/Principal Reasons provides a substantial discussion of the need for a good information database; the fundamental right of every citizen to have ready access to information about hazard risks; and the importance of raising awareness and understanding of natural hazards to enable more realistic risk assessments and action to avoid or mitigate risks.

Bay of Plenty Regional Coastal Environment Plan

Most of this regional plan became operative in July 2003. At the time of the review, the natural hazards chapter was still proposed, but the approval of the Minister of Conservation was sought in August 2003.

The most relevant chapters are Chapter 11: Coastal Hazards and Chapter 13: Structures.

Chapter 11: Natural Hazards is generally comprehensive in dealing with the coastal hazard issues addressed in the NZCPS.

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, coastal hazard related NZCPS policies.

Sections 11.1 Explanations and 11.2 Issues, Objective, Policies and Methods both explain and develop the NZCPS coastal hazard policies.

With a particular emphasis on hazard zoning, the Explanations and policies including Policies 11.2.3 (a), (b), (c), (e), (f), (n), (p), & (r) and Methods 11.2.4 (b) &(c) and Methods 11.2.5 (b) & (c) clearly articulate a vision of:

- establishing the benefits of hazard zoning;
- providing a regional overview, by means of its Areas Sensitive to Coastal Hazards (ASCH) study;
- establishing the benefits of consistent and soundly derived (robust) hazard zoning across the region; and
- providing guidelines and criteria to achieve consistent, robust region wide hazard zoning.

This is giving effect to NZCPS Policy 3.4.1 at a regional level, and promoting that policy at a territorial authority level.

The Explanations are clear and accessible for a range of readers. They assist in promoting understanding and sharing information about coastal hazards and the effects of coastal hazards and coastal hazard responses. This is not covered by the NZCPS.

One exception (in the 1 July 2003 proposed plan) relates to the functioning and effects of hard protection works. This explanation reveals the myth still commonly believed – that seawalls actively erode beaches, and a lack of understanding of the real and significant effects on beaches and other natural features when a coastline is in retreat (long-term trend of erosion), in comparison with the lesser effects where there is a dynamic equilibrium (see Appendix 3).

The effects of hard protection works relates to issues associated with NZCPS Policy 3.4.4 and the landward migration of natural features, which are not addressed in this plan. This migration can become ‘coastal squeeze’ in the presence of shoreline development protected by hard protection works.

The vulnerability of rivermouth areas to erosion is identified in Policy 11.2.3(n), but there is no similar recognition of other vulnerable features such as sandspits.

There is no reference to tsunami.

There is no reference to new types of development such as the canal development planned for Matakana Island.

This plan goes beyond the NZCPS coastal hazard policies in two notable ways:

- Encouragement in the Explanations of an integrated approach where coastal hazards are just one of a number of factors considered in determining the width of development setbacks.

- Articulation an outcome vision in the Objective: "No net increase in risk". This, however, is not well developed in terms of definitions, risk scenarios, and policy guidance on achieving the objective.

Chapter 13 Structures contains the rules for structures in the coastal marine area of the Bay of Plenty region. Interestingly, the objectives and policies in this chapter are also described as applying to the coastal marine area (as opposed to the coastal environment). This is in stark contrast to the objectives and policies in the plan's Coastal Hazards section reviewed above.

The policies contain no specific reference to protection works or the effects of protection works.

Policy 13.2.3(a) requires clear avoidance of all adverse effects of structures on certain high value areas – identified as Coastal Habitat Preservation Zones.

Tauranga District Plan

The Plan provisions

The Tauranga District Plan coastal hazard provisions have been prepared with the benefit of a number of expert reports on the nature and extent of coastal hazards, which included recommendations on the alternative management responses available.

The Hazards section of the Tauranga District Plan has not yet become operative because of a reference to the Environment Court by landowners. The *Skinner* case (Skinner v Tauranga District Council A163/2002) is related to a Western Bay of Plenty proposed District Plan reference (see the assessment of the Western Bay of Plenty District Plan in the following section), and canvassed similar issues. (The *Skinner* case is discussed in more detail below.)

The analysis shown in Tables 3.1.1–3.3.5 is based on the Proposed Provisions – 1998, which are now close to operative. However, even prior to the March 2003 Environment Court decision on the *Skinner* case that will enable the District Plan to become operative, the Council began a rewrite of the coastal hazard provisions – this is discussed in Section 4.5 of this review.

The most relevant chapters of the plan are Chapter 6: Hazards and Chapter 17: Natural Hazard Policy Area Rules, which is devoted to rules specific to hazard areas.

Even in the 1998 proposed policies, the emphasis in Chapter 6: – Hazards is on identifying hazard areas with graduated zones, protecting natural defences, and avoiding situations in which property is at risk.

Objective 6.1.4 is unclear in failing to distinguish between hazards and hazard risks, but addresses both the effects of development on coastal hazard (and hazard risk?) and the effects of coastal hazards (and coastal hazard responses) on development and the environment. (The clarity and integrity of several provisions in this plan is marred by unclear wording.)

The Introduction and Explanations of policies are fairly brief, and there is little specific guidance on how the objective is to be achieved. This is reflected in Tables 3.1.1–3.1.5.

Policy 6.1.4.1 gives partial effect to NZCPS Policy 3.4.3: "The capacity of the active foredune area to provide natural protection against inundation and erosion should be maintained and enhanced." This gives no recognition to the buffering ability of beaches and, particularly into the future, the dunes behind the currently active foredune.

Policy 6.1.4.2 is to not allow subdivision and development in extreme risk areas. This applies NZCPS Policies 3.2.1 and 3.2.2 to extreme risk areas.

Policy 6.1.4.3 is a restatement of section 106 of the Resource Management Act and section 36 of the Building Act, restricting subdivision and development in areas prone to damage from coastal hazards.

Policy 6.1.4.4 is that buildings in high risk areas "(should be temporary and relocatable so they may be removed when the risk of damage … becomes imminent)". This is planning ahead to be able to give effect to NZCPS Policy 3.4.6.

Policy 6.1.4.5 proposes having a limited duration for land use consents in high risk hazard areas. This is also planning ahead to be able to give effect to NZCPS Policy 3.4.6.

Policy 6.1.4.7 requires new subdivision allotments to be able to accommodate further development outside hazard areas. This policy gives partial effect to NZCPS Policy 3.4.5 for new infill subdivision, but does not include provision for existing development to retreat to a site on the allotment outside hazard areas.

In District Plan Methods 6.1.9.1, one interesting provision is the identification of 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 hazard' in a wide buffer. However, the relevant rule does not achieve this. Rule 17.1.1(b) refers only to hazards in determining the setback.

A reduction in net risk over time is identified as Anticipated Environment Result 6.1.9.4, but is not named as an objective and is not promoted explicitly by policies or rules other than the limited duration consent.

However, the Building Act is referred to in policies, and one 'other method' used extensively by Tauranga District Council to try to reduce net risk is to use the Council's building consent process and the Coastal Hazard Area Building Guidelines.

The goal is to allow redevelopment of properties provided there is a reduction in the exposure to hazard risk through relocatable buildings, setback of buildings on properties, long piles, etc.

The Environment Court decision on the Tauranga District Plan references

In this case, the Tauranga District Council had delineated graduated hazard zones along the Mt Maunganui and Papamoa beaches in line with expert advice. As with the Waihi Beach case reviewed below, a group of residents challenged the landward extent of the hazard zones (ie that included their properties), and produced their own evidence to challenge the certainty of the hazard and the validity of the hazard line delineation.

Of importance to this review is the role that the NZCPS, and the Court's own interpretation of sustainable management in coastal hazard areas, played in the decision. The same judge, Judge Bollard, presided over both this case and the Waihi Beach case. In summary, the features of the Environment Court decision are:

- There was some evidence that the beaches may currently be in dynamic equilibrium, and the Court accepted that it is very difficult to predict the extent of erosion and hazard risk over the next 100 years. Nevertheless, the Court did not consider it prudent to accept that there may be no hazard risk to shoreline properties in the face of a short period of good data and considerable uncertainty as to future variables and methodology. (The number of experts involved in support of one side or the other is a notable feature of this case.)

- Of major import was the lack of certainty as to future climate change and its effect on shoreline movement and hazard risks.

- The precautionary approach recognised in the NZCPS was in the mind of the Court.

- The economic effects of reduced development potential and lower property values from identifying hazards in a hazard zone did not over-ride the need to plan ahead as the Council had done.

- The Court did not uphold the safety buffer zone, on the basis that it considered enough caution had already been applied in arriving at the other zones, and a safety buffer would extend controls beyond the 100-year period accepted by the Court.

- The Court did, however, expect the Council to monitor hazard trends attentively on an ongoing basis, so that coastal hazard lines and District Plan provisions can be updated and refined.

- The Court suggested changing the nomenclature of the zones, on the basis that 'extreme' was too emotive.

An appeal to the High Court by the resident group was dismissed (AP9802).

Western Bay of Plenty District Plan

The plan provisions

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 the Waihi Beach Protection Society, a group of beachfront property owners. Both references challenged the development controls affecting coastline properties in coastal hazard areas at Waihi and Pukehina Beaches that were contained in the proposed District Plan:

- The District Council proposed that only the higher risk part of the Coastal Protection Area would have special controls on development pending the preparation of a comprehensive coastal management strategy for the Coastal Protection Area. Only subdivision and coastal protection works would be given discretionary activity status in the lower risk part. Development work would, in any case, be controlled by section 36 of the Building Act.

- The Environment Bay of Plenty reference sought, in essence, that all building construction in the whole of the Coastal Protection Area should have discretionary activity status.

- The Waihi Beach Protection Society reference challenged the existence of a trend of erosion and hence the extent of the identified hazard area, and also sought that Council construct protection works at general ratepayer expense as an alternative to restrictive development controls.

The interim decision of the Environment Court, A27/2002, was that Environment Bay of Plenty's position should be accepted, but did propose that:

- the Coastal Protection Area could be separated into 'primary risk' and a 'secondary risk' areas (rather than a high risk and a low risk areas), in order to acknowledge the significant risk throughout the whole Coastal Protection Area during the next 100 years; and
- in the 'secondary risk' area, building activity could have limited discretionary activity status with a focus on management of potential effects arising from coastal hazards.

The final decision of the Environment Court, A141/2002, reflected the agreement of regional and district council planners on limited discretionary activity rules for the 'secondary risk' area, along with assessment criteria for considering applications. These changes were incorporated in the District Plan and it subsequently became operative.

(See the next section for further discussion of the Environment Court decision A27/2002.)

Since the District Plan became operative, Plan Change 23 (to give effect to the Waihi Beach Growth Strategy) has proposed additional control of subdivision and development. Notably, more than one dwelling in the primary risk area will become 'non-complying', and subdivision in the primary risk area will become prohibited.

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 embellishments or extensions, and little explanation. The limitations in the amount and quality of existing coastal hazard information is cited as a reason for not applying such higher level policies to the Western Bay of

Plenty in a more specific way – a common problem, especially for smaller councils with less resources.

The Environment Court case cited here has substantially strengthened controls through the District Plan rules, and the proposed Plan Change will give a further clear message to developers through the non-complying and prohibited rules for the primary risk area.

The Environment Court decision on the Western Bay of Plenty District Plan references

The importance of this decision to this review is the role that the NZCPS, and the Court's own interpretation of sustainable management in coastal hazard areas, played in the decision (A27/2002).

The Environment Court referred to an earlier case where a 50-year planning period had been adopted by the Court. In adopting a different position in this case, the Court stated, among other things:

> *Moreover, it should be remembered that when the [earlier] decision was delivered (January 1994), the NZCPS had not been gazetted.*

The decision then quotes in full all of the NZCPS General Principles and Policies that are identified in this review as coastal hazard related.

After traversing the facts and the policy context, the Environment Court judgment was that, in summary:

- There is no duty on the Council to protect land from erosion, and it is no longer taken for granted that the natural process of erosion is necessarily an evil or mischief to be stopped wherever possible (cited from Falkner v Gisborne District Council A82/94).

- Drawing a hazard line is not a precise matter. "The task is to draw a line as an administrative boundary which is conveniently ascertainable", (cited from Save the Bay v Canterbury Regional Council C6/2001).

- The 100-year planning period was accepted.

- Proposals for maintenance and upgrading of existing protection works will require assessment of whether those proposals remain the best practicable option for sustainable management of an area's natural and physical resources.

- Proposals for new protection works require careful assessment as to their likely effectiveness and their impacts. Impacts include: visual impacts, impacts on the beach generally, impacts in relation to access and amenity values and, if damaged, the prospect of the beach becoming unsightly or dangerous. The historical experience of the series of protection works at Waihi Beach is instructive.

- The importance of careful analysis and integrated planning in managing the actual and potential effects of natural hazards is reiterated. This should be informed by, inter alia, the pertaining values, directives, and guidance provided by the RMA, the NZCPS and other relevant instruments.

- Reiterated throughout is the need to both plan ahead and to take a precautionary approach 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. This supports the Regional Council approach of using District Plan controls in the secondary risk area. Building Act controls were not a substitute for District Plan controls.

- The concern expressed in the *Falkner* decision is also expressed in this decision. The Court notes the 'grim connotation' for beachfront owners who perceive not only a lack of local government support but also, as a result, exposure to a greater likelihood of damage to their properties from coastal hazards. However, until decisions are made on the best practicable option for a strategic programme of responses to the hazard, the Regional Council approach is preferred.

- The District Council was commended for its notable efforts to date to address the complex raft of issues.

Whakatane District Plan

The Whakatane District Plan is not yet operative, with the proposed district plan preparation apparently focused on disposing of a number of transitional plans and then preparing plan changes later.

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. However, Council staff conveyed to the reviewer a clear intention to address these deficits, and work has begun.

Importantly, a detailed coastal hazard study has now been undertaken of all of the coastline identified as vulnerable in the Areas Sensitive to Coastal Hazards (ASCH) study undertaken by Environment Bay of Plenty. The Tonkin & Taylor report *Whakatane District Council: Coastal Hazard Analysis* is dated November 2002. The information and platform for good policy development is therefore in place, but the policy work remains to be done before the District Plan can give effect to coastal hazard related NZCPS policies.

This District Plan is a useful example of a plan at a different point on the spectrum of consistency with the NZCPS, almost 10 years after gazettal of the NZCPS. Along with the Wairarapa district plans, this is not atypical of smaller, less well-resourced councils. Such councils perhaps also do not yet have the pressure of large scale development that would create a sense of urgency about completing the policy work required (despite the critical importance of planning ahead before development occurs: "Prevention is better than cure").

For Whakatane District, council staff advised the reviewer that there is 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 hazard zones along at least the reserved part of the rural coastline. It also simplifies its task of creating appropriate (and generously precautionary) buffers in greenfield areas in rural zones, and in areas already designated

for future urban expansion near Whakatane, without having to deal with conflict between protection of public values and protection of private landowner rights and expectations.

However, the Tonkin & Taylor report clearly identifies that on coastline in private ownership in this district there is increasing development occurring, which is having the combined effect of increasing the value of assets subject to hazard, and increasing the damage to dunes which act as natural defences against coastal hazards.

In this November 2002 report, Tonkin & Taylor recommends management responses that are generally in accord with coastal hazard related NZCPS policies. In effect, a strategy that provides a base for, and considerable guidance towards, coastal hazard management provisions substantially consistent with NZCPS policies has been placed in front of the Council. (See that report's Appendix 1: Tables 4.1–4.5 Draft Provisions.)

Appendix 7

Analysis of Consents in the Bay of Plenty Region

This appendix supports section 3.1.3 in the main report. It contains a more detailed analysis of the following consent processes, in relation to the coastal hazard related NZCPS policies:

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

Waihi Beach seawalls: investigation of hazard response options

There has been a process running for the last 10 years to determine how to deal with coastal hazards at Waihi Beach in the Western Bay of Plenty District. More precisely, there have been two processes running concurrently: the preparation of a Waihi Beach Growth Strategy and preparation of a Coastal Hazard Response Strategy.

That process has led to the Council resolution to seek consents for rock revetment seawalls at Waihi Beach.

The following documents (reviewed in the following sections) give a flavour of the two intertwined processes:

- *Coastal erosion, setback determination, and recommendations for management of the Waihi–Bowentown and Pukehina Beach and dunes* – Terry Healey, September 1993

- *Our beach is eroding away! What are we going to do about it?* – Council flyer to Waihi Beach residents, March 1997

- *Strategic options for sustainable management of the coastal interface along Waihi Beach* – Jeremy Gibb and Tonkin & Taylor Ltd, May 1997

- *Peer Review of Strategic Options Report* – Terry Healy, August 1997

- *Planning for the future of Waihi Beach* – Council flyer to Waihi Beach residents, September 1997

- *Waihi Beach erosion update: Three options…* – Council flyer to Waihi Beach residents, December 1997

- *Waihi Beach Coastal Management Options* – Tonkin & Taylor, August 1998

- *Waihi Beach Management: Evaluation of Options* – Tonkin & Taylor, November 1999

- *What's to be done about flooding, beach erosion, and urban growth: Nine options…* – Council flyer to Waihi Beach residents, November 1999

- *Summary of Submissions on the Nine Options* – Council staff report, February 2000

- *Report to Council on Waihi Beach management options* – Council staff report, May 2000

- *Waihi Beach Growth Strategy 2002* – Council study report, May 2002

- *Waihi Beach: the way forward* – Council flyer to Waihi Beach residents, May 2002

- *Resolution to proceed with protection works* – Council District Directions Committee, October 2002

- *Resolutions to proceed with rock revetment protection works at Waihi Beach* – Council District Directions Committee, 5 December 2002 and 18 February 2003

A review of each of these documents, focusing on the influence and effectiveness of the coastal hazard related NZCPS policies on each document, follows.

Coastal erosion, setback determination, and recommendations for management of the Waihi–Bowentown and Pukehina Beach and dunes – Terry Healey, September 1993

This report pre-dates the NZCPS, and is interesting for its brief mention of a new integrated management concept:

> *The coastal hazard zone, as normally understood and applied, is exclusive of the concept of protecting the natural shoreline ecosystems, a view recently advocated by the Department of Conservation as being incorporated within the concept of the coastal hazard zone.*

It goes on to examine the Resource Management Act Part II provisions and proposes using 'development setbacks' rather than 'coastal hazard zones' in order to address natural character protection. This is seen as being achieved by controlling the visual dominance of development on the beachfront.

The summary of policy issues sets out coastal management implications which focus on avoiding development in coastal hazard setback areas and protecting private property. The effects of seawalls on beaches and beach amenity are not mentioned.

The gaps in this analysis in 1993 by a leading coastal hazard management practitioner in New Zealand indicates that the NZCPS has played a significant role in promoting a more widespread attention to the effects of seawalls on beaches and beach amenity values, and in promoting a broader conception of what natural character comprises (NZCPS Chapter 1).

***Our beach is eroding away! What are we going to do about it?* – Council flyer to Waihi Beach residents, March 1997**

This flyer sets the scene of erosion occurring and a 2.6 kilometre seawall that is beyond repair (built between 1962 and 1983).

The Council's intention is: "A solution that addresses the erosion of the beach front and also ensures better public access along the foreshore."

With impressive faithfulness to the spirit of NZCPS Policy 3.4.6 (and the Resource Management Act generally), the Council flyer explains to residents (summarised):

> *Some property owners would like the seawall to be re-built.*
>
> *However, before Council can even consider this, it has a statutory, as well as a moral obligation, to show that a seawall is, in fact, the best way to deal with the erosion.*
> *...*
>
> *... Council has decided to investigate six options in more detail:*
> - *beach and dune management*
> - *hard engineering options*
> - *managed retreat*
> - *stream diversion*
> - *planning responses*
> - *do nothing.*
>
> *In assessing each option, the following are being taken into account:*
> - *the effect on the environment*
> - *the cost – establishment and ongoing maintenance*
> - *the potential for the option not to work*
> - *the effect on the community – including distribution of benefits and costs.*

This approach suggests a strong and effective influence of the NZCPS.

***Strategic options for sustainable management of the coastal interface along Waihi Beach* – Jeremy Gibb and Tonkin & Taylor Ltd, May 1997**

The development history that led to the existing seawall is set out as follows:

> *The Shaw Road beachfront residential subdivision of 1948 to 1951 allowed by Waihi Borough Council involved flattening the foredune and was subject to serious erosion and flooding from the sea between 1951 and 1958. Notwithstanding this, Ohinemuri County Council allowed further beachfront subdivision in areas prone to coastal hazards at Island View (1957), The Loop (1959) and Glen Isla Place (1975).*

This report assessed 15 options against the goal of sustainable management of the coastal interface, with reference to 'national policy', presumably the NZCPS, as well as effectiveness and cost.

The conclusion was that a combination of stream diversion, beach nourishment, removal of the old seawall, and managed retreat would have the highest probability of achieving the objective of sustainable management.

In relation to cost, the summary states: "The most expensive total cost options are the combined options, although their per metre cost is lower than some of the hard engineering options as they protect more shoreline."

In relation to seawalls, the summary states: "Seawalls do provide local protection to the backshore property, but at a cost to the beach and adjacent shoreline areas. … All of the hard engineering options are inconsistent with Resource Management Act Principles and national, regional, and local Policy, and generally have the highest costs and adverse effects."

Peer Review of Strategic Options Report – Terry Healy, August 1997

Healy considered that the focus on natural features and processes in the report was a narrow definition of sustainable management, as sustainable management also involved human activity. His peer review of the technical analysis is a reminder of differences that continue to this day between the handful of well known coastal hazard management experts in New Zealand. His comments do not make reference to the NZCPS policies.

Planning for the future of Waihi Beach – Council flyer to Waihi Beach residents, September 1997

This flyer outlines the wider strategy for future growth at Waihi Beach, with reference to the beach erosion issue, and advertises public meetings to discuss future growth, sewerage, stormwater and beach erosion.

Waihi Beach erosion update:Three options… – Council flyer to Waihi Beach residents, December 1997

This flyer reported back to residents on the views expressed at public meetings as to the advantages and disadvantages of the six different types of response, and the voting on the different options.

The voting ranged widely but the majority favoured the seawall or creek diversions, or a combination of these plus dune management or beach nourishment.

The effects of seawalls on the beach is discussed, and the NZCPS is given as a reason for investigating the less favoured option of managed retreat.

It is announced that the future focus for detailed investigation will be stream management, seawall protection, and managed retreat for detailed investigation.

***Waihi Beach Coastal Management Options* – Tonkin & Taylor, August 1998**

The consultants undertook detailed analysis and costings of three options (including stream jetties rather than stream diversion).

***Waihi Beach Management: Evaluation of Options* – Tonkin & Taylor, November 1999**

The role of the NZCPS is discussed in the statutory context section, but policies are not cited.

A preliminary evaluation of 23 options (combinations of responses) scored the options for cost, and also scored the options against five other criteria, including reduction of risk from hazards, improving conditions for infill development and urban growth, and improving sustainable management.

Only the options involving a combination of stream diversion and managed retreat scored highly on all the criteria of 'reduction of hazard risk', 'improve conditions for urban growth', and 'improve sustainable management'.

The seawall option scored the lowest score for all criteria except for 'reduction of risk' and 'cost'.

The nine selected options were examined in further detail and costed over a 50 year period, with net present value of the 50-year costs also calculated.

Following the evaluation of the nine options, the Tonkin & Taylor report's Option Summary confirmed the preliminary evaluation:

> *The results indicate that only options that include some form of upper catchment diversion have the potential to provide for significant increased urban growth without increasing the adverse impacts of shoreline erosion and catchment flooding. However, these options have the highest cost and are constrained by the requirement to improve water quality prior to discharging into the harbour.*

***What's to be done about flooding, beach erosion, and urban growth: Nine options…* – Council flyer to Waihi Beach residents, November 1999**

Each of the nine options is detailed on a plan, effects (both positive and negative) are summarised, and the total cost given.

The yearly cost in special rates for the different options are given in a table.

Residents are asked to complete a questionnaire on the nine options.

***Summary of Submissions on the Nine Options* – Council staff report, February 2000**

The detailed questionnaire provides an interesting insight into the views of both beachfront residents and non-beachfront residents.

Not surprisingly, in response to the question on which qualities of Waihi Beach are important and should be protected, the 'Beach/Dunes' was the overwhelming favourite.

Report to Council on Waihi Beach management options – **Council staff report, May 2000**

This is the first report to the Council seeking a decision (or decision in principle) on which option to adopt.

The report concludes with:

> *In making its decision, Council will need to weigh up and determine an appropriate balance between community expectations, future benefits, cost, affordability, and statutory requirements.*

***Waihi Beach Growth Strategy 2002* – Council study report, May 2002**

In this wider strategy for future growth, it is clear in the comments under the heading of Coastal Hazards that expectations of further subdivision in the coastal hazard areas had been raised by the recent reticulation of sewage (at considerable cost to residents), but that:

> *A review of the purpose of the RM Act Part II and the policy directions in the New Zealand Coastal Policy Statement supports the need to limit intensification of land use in identified hazard areas.*

(See the review of the Western Bay of Plenty District Plan, including the proposed Waihi Beach Growth Strategy plan change, in Appendix 6.)

***Waihi Beach: the way forward* – Council flyer to Waihi Beach residents, May 2002**

The Council advised the Waihi Beach community of its view that the diversion of Two-Mile and Three-Mile Creeks was considered to be unaffordable, and recommended two alternatives as possible options for consideration:

- the diversion of Three-Mile Creek and the construction in the short term of protection works at Two-Mile Creek; or
- the construction of protection works in the short term at both Two-Mile Creek and Three-Mile Creek.

Resolution to proceed with protection works – **Council District Directions Committee, October 2002**

The Minute Action Sheet records:

> *In discussion of the options available for designing protection works, the Committee was advised that design of such works to ensure appropriate outcomes was very technical.*

The Committee resolved:

> *1. Notes that the diversion of Two-Mile Creek and Three-Mile Creek to Tauranga Harbour is considered to be the best long-term sustainable option to address coastal erosion in its locality at Waihi Beach.*
>
> *...*
>
> *10. Agrees to the construction of protection works in the short term at both Two-Mile Creek and Three-Mile Creek.*
>
> *Reason: That [rock revetment] protection works ... are considered at present to be the best practicable option to address coastal erosion.*

The reference to 'best practicable option at present' is in contrast to the NZCPS Policy 3.4.6 reference to 'best practicable option for the future'.

Resolutions to proceed with rock revetment protection works at Waihi Beach **– Council District Directions Committee, 5 December 2002 and 18 February 2003**

On 5 December, it was resolved that the Committee:

> *Agrees that the protection works ... shall be designed by a suitably qualified person with coastal protection experience on open coastline. The objective of the protection works is to provide protection whilst enhancing the amenity value of the beach.*

A staff report on 19 December 2002 pointed out that the protection works in the option put forward meant rock revetment protection works. It is noted, however, that:

> *… the resolution requiring the objective of the protection works to provide protection whilst enhancing the amenity value of the beach creates an impasse if the protection works are to be rock revetment protection works*.
>
> "*The advice Council has received to date is that the construction of hard rock revetment protection works will adversely affect the amenity value of the beach. Therefore the resolution as worded is unable to be given effect to, if Council means the protection works are to be a rock revetment.*

On 18 February 2003, the 5 December resolution above was rescinded and replaced with:

> *Agrees that the rock revetment protection works … shall be designed by a suitably qualified person with coastal protection experience on open coastline. The objective of the protection works is to provide protection whilst being designed to enhance the existing appearance and safety of the beach including the protection works.*

Waihi Beach – infill subdivision in the Secondary Risk Zone

This May 2002 application by C & B Myers involved a property at Waihi Beach, across Broadway from the beach.

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 property is in the low risk (Secondary Risk) coastal protection area, and subdivision is a discretionary activity.

The Environment Court interim decision on the District Plan reference had been released by this time, effectively accepting on a range of expert evidence that there was significant risk in the Secondary Risk Zone in the next 100 years. Nevertheless, the surveyor/planning consultant for the applicant, Shrimpton & Lipinski, undertook their own analysis that:

- estimated the erosion risk would not affect the property for between 181 years and 306 years;
- referenced the Building Act 50-year requirement;
- considered that the likelihood that the dwellings would be replaced in the planning period was relevant to the subdivision; and
- concluded that in terms of a 100-year planning period, "the property is unlikely to be subject to the effects of coastal erosion".

In its assessment of the proposal against the District Plan policies (which are closely aligned to the NZCPS natural hazard policies) each policy is quickly dismissed as being consistent with the proposal, eg "the proposal to subdivide and build an additional dwelling will not increase the risk to Coastal Erosion."

The application conclusion begins with:

> *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.

It is clear that the coastal hazard related NZCPS policies have not been effective in influencing such applications by consultant surveyors/planners acting for their property owner clients. In this case, the consultant's application even cites a recent Environment Court judgment that carefully addressed the

coastal hazard risk that affected the property, and that also carefully addressed all of the coastal hazard related NZCPS policies.

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

This application by Mr Carter on behalf of his family trust was to construct two substantial dwellings within one structure on residential zoned land within the Primary Risk Zone on Pukehina Parade at Pukehina Beach (file reference: P/1576/5062/2).

The bulk of the two-dwelling structure was no greater than the permitted activity bulk and height standards in the District Plan for a single dwelling.

The application was publicly notified in March 2002 and four submissions in support and two submissions in opposition, from Environment Bay of Plenty and the Department of Conservation, were received.

The coastal hazard risk was the primary issue for the opposing submitters, expressed as:

- increased pressure for coastal protection works;
- 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 officer report is dated January 2003, and cites the new Assessment Criteria and Policies in the District Plan, following the Environment Court reference and agreed changes to the District Plan.

(The plan changes now proposed would make any second dwelling in the Primary Risk Zone a non-complying activity. In this case, the proposal was non-complying because of the requirement for a minimum 800m^2 per dwelling for sites without a sewerage connection.)

The applicant provided a coastal hazard assessment from a Dr J Abbott, which the Council had peer reviewed by Jim Dahm. These reports were considered alongside the Council's own hazard assessment by Terry Healy in the light of the recent Environment Court reference judgment.

Dr Abbott's assessment is reported as:

- asserting a long-term process of accretion;
- questioning the application of sea level rise (Bruun's rule);
- promoting a 50-year time horizon; and
- asserting no difference between two dwellings and one very large dwelling in the same location.

The reporting officer preferred the evidence of Mr Dahm, as it supported a precautionary approach to coastal hazard management in the light of existing uncertainty. The position of Mr Dahm's report was also seen as being supported by the obligation on the Council to manage development in the coastal hazard area in accordance with:

- the provisions of the regional and district plans;
- the NZCPS; and
- the recent findings of the Environment Court.

The officer report anticipated that once two dwellings on a title were accepted, the level of capital development along the coastline will significantly increase over time. Also, that once a property has two dwellings, it may be very difficult to decline a subdivision.

The overall focus of the officer report is on the increased hazard risk for this property (as well as for others that would likely follow in seeking second dwellings).

The officer report cites the NZCPS Chapter 3 policies, notably NZCPS Policies 3.3.1, 3.4.1, 3.4.2 and 3.4.5. A connection between Policy 3.4.5 and increased risk is made with the assertion that the higher the value of development in a coastal hazard area, the more likely it is that hard engineering coastal protection options will be pursued:

> *To some degree, this has already been experienced at Waihi Beach. The high value of beachfront property and assets has resulted in demand for hard protection works rather than relocation of assets away from the risk.*
>
> …
>
> *Overall, the NZCPS places an emphasis on the need to manage development in areas subject to coastal hazards and advocates a precautionary approach.*

The application relied to a large degree on the relocatability of the proposed two dwellings. However, the officer report warns that:

> *the provisions for relocation are as yet untested and … there is the potential for the conditions to be compromised by landowner resistance and/or legal challenge.*

and

> *the conditions for relocation of single dwellings are tied to the [expectations of] reasonable use of the property and the acknowledged right 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 Hearing and Consents Committee heard the application, and granted consent subject to conditions on 7 March 2003.

In the Reasons for Decision, the Committee accepted the level of risk identified for the Primary Risk zone, but went on to consider that:

- *the building does meet the bulk and location performance requirements in the District Plan;*
- *it is difficult … to consider provision for relocation of two dwellings as materially different to provision for relocation of a single dwelling; and*
- *the side by side design does not raise difficulties for relocation.*

> *On the basis of the consent conditions which require relocation and taking into account the design of the building structure, Council does not find the application contrary to [the District Plan, NZCPS, Regional Policy Statement and Coastal Plan]*

(The conditions placed on the consent are essentially identical to the conditions placed on the single replacement dwelling reviewed in the next section. The conditions are summarised there, and a full copy of the relevant conditions is attached to this appendix.)

On the face of it, the coastal hazard related NZCPS policies have been effective in achieving (in the wider context of this consent process) a comprehensively consistent Regional Coastal Environment Plan, a District Plan that is consistent at least to the extent of carrying the coastal hazard related NZCPS policies into the District Plan provisions, and an officer report that interprets all those policies and provisions with regard to local and national experience of consents in coastal hazard areas.

That experience includes awareness of the implications of allowing two dwellings on a lot, and of relying on relocation and retreat by property owners in the face of hazard threat.

Both *Wallace v Waitakere City Council 1998* and the more recent *Henry v Kapiti Coast DC W24/2003* (covered in this review) make it clear that once there are two dwellings on a title (establishing both the development and existing use rights), it is difficult later to justify refusing consent to subdivision (which has become little more than the drawing of a line between the dwellings).

However, it can also be said, 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 (or 'not- increasing- risk') in coastal hazard areas.

As at the time of this review, an appeal of the decision of Environment Bay of Pleanty and the Department of Conservation is still in mediation with no clear indication as to whether the matter will proceed to a hearing.

Pukehina Beach – replacement dwelling in Primary Risk Zone

This is another application for a dwelling on Pukehina Parade at Pukehina Beach, but for a single replacement dwelling (file: P/1576/4074/2 – Madhuri Ballal).

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 primary and secondary risk areas).

The full set of the hazard risk mitigation conditions for this single dwelling are attached to this appendix for reference.

In summary, the conditions seeking 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;
- requirement to relocate the dwelling once the toe of the foredune is 8 metres from the dwelling (to 15 metres from the toe of the foredune or off the property) unless the Council can be satisfied that the risk of further erosion is unlikely;
- covenant on the title to register the consent conditions; and
- Building Act section 36(2) notice on the title.

The reasons for 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 exist for the owner to build on the property.

As stated in the officer report for the two-dwelling consent reviewed earlier, the efficacy and enforceability of these 'requirement to relocate' conditions has yet to be proven with a successful implementation. The experience at Wainui Beach, Gisborne (refer section 3.4 in the main report and Appendix 12 in this volume) demonstrates what determined residents can achieve in the way of challenging legislative requirements and Council decisions.

19 March 2003

13/ 1576/40742

Ballal, Madhuri Lamidhar
Joseph. Mathew
C/- Gerald Stock Architect
P O Box 1377 Rotorua 3215

Dear Sir/Madam

Application for Resource Consent

Applicant BALLAL MADHURI LAMIDHAR
JOSEPH, MATHEW
Date of Council Decision 18 March 2003 (Delegated Authority)

I wish to advise that Council has granted the above application for land use consent in the following terms:

(a) THAT pursuant to Section 94(2) of the Resource Management Act 1991. the Western Bay of Plenty District Council resolves that the application need not be notified in accordance with Section 93 of the act because:

(i) Council is satisfied that the adverse effects on the environment of the proposal will be minor, and

(ii) Council considers no other persons will be adversely affected by the proposal.

(b) THAT pursuant to Sections 104. 105 and 108 of the Resource Management Act 1991. the Western Bay of Plenty District Council grants its consent to the application by ML Ballal and M Joseph for a discretionary activity being the erection of a dwelling located on Lot 424 DPS 10551, 571 Pukehina Parade subject to the following conditions:

1. THAT the dwelling be sited and constructed in accordance with the plans undated and report prepared by Gerald Stock Architect dated 16 February 2003 as submitted with the applications by ML Ballal dated 20 February 2003.

2. THAT the closest point of the dwelling be sited no closer than 6m from the rear (sea) boundary of Lot 424 DPS 10551.

Note: In respect of condition 2 please ensure that your building contractor is fully aware of the distance stipulated in the above conditions

3. THAT the dwelling be designed and constructed so as to be readily relocatable to the satisfaction of the Principal Administration Officer.

4. THAT the consent holder submit to Council's Principal Administrative Office or delegate for approval, final building consent plans and a building relocation strategy including a detailed schedule of how the structure will be constructed for relocation. The relocation process, equipment to be used, any site development restrictions to ensure that the relocation strategy will not be compromised and confirmation from a house removal company that the relocation strategy is practicable. No construction works shall commence until written approval to the strategy has been provided by Council's Principal Administrative Office or delegate. Any costs incurred by Council with respect to reviewing the strategy shall be reimbursed by the consent holder.

5. THAT sufficient access be maintained on the property to allow for the relocation of the dwelling.

6. THAT earthworks, Excavations, filling and removal of vegetation on the property seawards of the proposed dwelling be limited to minor activities consistent with normal residential use (eg. gardening).

7. THAT the position of the building from the toe of the foredune be accurately measured to the satisfaction of the Principal Administrative Office in the month of April on a two yearly basis beginning in April 2004.

8. THAT where the toe of the foredune comes within 8 metres of the building foundations (excluding decks. and conservatories) the owner be required to relocate the building so that it is over 15 metres from the toe of the foredune. If it is not possible to achieve a 15 metre set back upon relocation, then the dwelling will have to be removed from the property.

9. THAT as an alternative to condition 8 the dwelling will not require relocation If the Principal administrative Officer can be satisfied that the risk of further imminent erosion is unlikely and the applicant provides a report from a suitably qualified person detailing current and future predicted erosion/accretion, appropriate monitoring procedures and performance standards for when the dwelling will need to be relocated. Any submitted report may be peer reviewed by Council at the applicant 's cost.

10. THAT conditions 3 to 9 shall be registered on the Certificate of Title of the property by covenants or suitable legal mechanism and this covenant will be prepared by Council's solicitors at the applicant's cost.

l 1. THAT an endorsement on the certificate of Title in accordance with Section 36(2) of the Building Act 1991 be issued for any building consent on the Property and registered on the title prior to any construction works being undertaken in respect of this consent.

12. THAT Council may review consent conditions 4 to 9 hereof by giving notice of its intention to do so under Section 128 of the resource Management Act at any time commencing within the first six months of the consent being issued and thereafter every two years and within one month of the monitoring information being supplied in accordance with condition 6 of this consent. The consent conditions may be reviewed for the purpose of ensuring that an appropriate level of mitigation is provided to the dwelling to protect it against coastal erosion and inundation.

13. THAT a vehicle entrance so serve the proposed new dwelling at 571 Puke-hina Parade be constructed in accordance with council's Standard specification Drawing No AFQI, Diagram C and that the work required by this condition to be supervised and certified as complete in accordance with this condition by the developers representative (refer Section 15.3.5. I of Council's operative District Plan) prior to the proposed dwelling being occupied. A culvert shall be installed to convey stormwater and to protect the Council road alternatively at the developers representative discretion and approved by Council the culvert can be substituted by (he vehicle entrance being constructed to the same contour as the existing table drain.

14. THAT the consent holder shall pay Western Bay of Plenty District Council such administration charges as are fixed at the time by the said Council in accordance with Section 36 of the Resource Management act 1991. (This specifically includes any monitoring inspections.

REASONS FOR DECISION:

1. The proposed dwelling has been set back from the coast at a distance greater than that of the existing dwelling.

2. Council is satisfied that the conditions of consent will mitigate the adverse effects of the coastal environment on the building.

3. The proposed dwelling is designed to mitigate the risk of inundation and erosion by being relocatable and by the setting of performance criteria.

4. 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 exist for the owner to build on the property.

5. A Section 36(2) endorsement under the Building Act 1991will be registered on the Certificate of Title making the owners and any future purchasers aware of hazards in relation to the property.

ADVICE NOTES:

1. A building consent will be required for all building work including stromwater and effluent disposal systems.

2. THAT the applicant shall submit building consent plans to the consent authority for it 's approval before proceedings with construction work on the site such as to confirm with condition 2 as to the proposed building 's relocatable form of construction.

3. On site sewerage treatment and disposal will have to comply with Environment BOPS " On Site Effluent treatment Regional Plan ".

4. This consent will lapse after two years of being granted unless considerable progress has been maid and is continuing to be made to complete this project.

5. Any lack of recorded archaeological sites on this property may be due to one of two factors:

(a) there are no sites present or
(b) there has not been an archaeological survey undertaken.

Archaeological sites are historic places as defined by the Historic Places Act 1993 and all archaeological sites are protected under the provisions of that Act. Any activity which impacts on an archaeological site, requires the prior permission of the Historic- places Trust. If any archaeological site is uncovered during development then work must stop until the site can be assessed by a qualified archaeologist and an authority to modify, damage or destroy the site applied for under either Section l l or 12 of the Act.

6. Full compliance with the conditions of consent is necessary to carry out the activity to which this consent relates. Your progress towards satisfying the conditions of consent will be monitored by Compliance Team Staff and failure to meet these conditions may result in enforcement action being taken in accordance with Council's monitoring Compliance and Enforcement Strategy. This may involve the issuing of an Infringement Notice (instant fine) and/or a monitoring fee.

7. Please find attached an information sheet regarding Regional Plans. Any enquires relating to these matters may be referred directly to Environment BOP.
If you wish to object to any part of this decision you have 15 working days from the date of receiving this notice to lodge your objection with the Council.

Yours faithfully

Andrea Mulder
Consents Officer
Email: aum@wbopdc.govt.nz

Appendix 8

Analysis of the Policy Statement and Plans in the Auckland region

This appendix supports section 3.2.2 in the main report. It contains a more detailed analysis of the coastal hazard related provisions in the:

- Auckland Regional Policy Statement;
- Auckland Regional Plan – Coastal; and
- Rodney District Plan.

Auckland Regional Policy Statement

As for the Bay of Plenty region, the existence of a detailed regional coastal environment plan (RCEP) means that provisions in the Regional Policy Statement (RPS) are largely a general overview of provisions in the RCEP. This is particularly true 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.

Nevertheless, the RPS is notable for its 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 as an environment outcome.

Auckland Regional Plan – Coastal

Although it is not clear from the title or introduction, the content of this regional plan makes it clear that this is a 'regional coastal environment plan' in the common parlance. The Regional Policy Statement 7.4.26.2 states that

> *ARC will prepare a Regional plan incorporating a Regional coastal plan …[which] will, over time, progressively include objectives and policies and rules [for section 30 duties].*

All relevant parts of this plan are effectively operative. The most relevant chapters are Chapter 12: Structures and Chapter 21: Natural Coastal Hazards.

Chapter 21 – Natural Coastal Hazards begins with the point that: "Coastal processes are a part of the natural character of the dynamic coastal environment. Natural hazards arise from the interaction of such processes with human use, property or infrastructure."

Primary coastal hazards are identified as erosion, inundation, land instability [ie sea cliff erosion or collapse], rising mean sea level, and tsunami.

The need for integrated management across the MHWS boundary is emphasised.

The Issues section identifies the effects of coastal hazards on development, and the effects of inappropriate development on coastal hazards, and the Objective seeks "To control the use of land in the coastal environment to ensure the adverse effects of natural coastal hazards are avoided or mitigated".

The objective does not establish the hierarchy of 'avoidance- then- mitigation' promoted by NZCPS Policy 3.2.2, and neither Issues nor Objectives identifies the specific issue of the effects of coastal hazard responses.

However, the policies that follow are comprehensive in giving effect to the coastal hazard related NZCPS policies, and are notable for their attention to detail, precision and clarity.

Notable is Policy 21.4.1, which makes sense of NZCPS Policy 3.4.4 by combining it with NZCPS Policy 3.4.5 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.*

Policy 21.4.2 applies NZCPS Policy 3.2.2 to existing subdivision, use and development adversely affected by coastal hazards by stating that "further subdivision, use and development that exacerbates the coastal hazard, or creates a new hazard, should be avoided".

This policy does not address the situation where the coastal hazard risk is exacerbated or increased, as opposed to the coastal hazard itself (which usually is the result of structures in the coastal marine area).

Policy 21.4.3 gives effect to NZCPS Policy 3.4.3: "Natural features such as beaches … sand dunes … mangroves and wetlands, which may buffer subdivision, use and development from coastal hazards, shall be protected."

This policy is notable in including the protection of beaches amongst the natural features to be protected.

Policy 21.4.4 gives partial effect to NZCPS Policy 3.4.6 with the exception that reference is made to "non-structural protection measures, including planting and beach nourishment", rather than to abandonment or relocation, as alternative methods to consider. Also, as is almost universally the case in the case study plans, the words "for the future" are omitted after "best practicable option".

Policy 21.4.5 goes beyond NZCPS Policy 3.4.6 by specifically identifying high value areas, being any Coastal Protection Area 1 or Cultural Heritage Schedule 1 site etc, where coastal protection works shall be avoided if they will damage these special areas.

Policy 21.4.6 gives effect to the relevant NZCPS Chapter 1 natural character policies in relation to coastal hazard management planning by specifically stating that "Plan Part III Values, Chapters 3 –9 shall be considered in the assessment of any coastal protection measures".

Policy 21.4.8 goes beyond the out-of-date wording in NZCPS Policy 3.4.2 by stating that "the best available estimate of mean sea level rise for the locality in question shall be used".

21.6 Other methods includes methods that give effect to other NZCPS Policies.

Method 21.6.1 gives partial effect to NZCPS Policy 3.4.1, the second part of NZCPS Policy 3.4.2, and NZCPS Policy 3.3.2 by proposing, in consultation with territorial authorities, to:

- *develop a regional methodology for the identification of natural coastal hazards, including areas which could be subject to erosion or inundation as a result of mean sea level rise*

- *maintain a database of identified natural coastal hazard areas*

- *undertake research on risks and impacts of natural coastal hazards*

- *undertake research on methods to avoid, remedy or mitigate natural coastal hazards.*

  The ARC will make this information available to territorial authorities and the general public

The Auckland Regional Council (ARC) has begun to give effect to this method with the publication of the Auckland Coastal Hazard Strategy and Coastal Erosion Management Manual, July 2000, ARC Technical Publication No. 130 which is a reference text and guide that is well regarded nationally. It promotes the use of hazard zoning as a basic tool and pre-requisite of sustainable coastal hazard management planning.

Method 21.6.2 states that: "The ARC, in consultation with relevant parties, will establish monitoring programmes for natural coastal hazards …". This is a common extension of NZCPS Policies 3.3.2 and 3.4.1.

Method 21.6.3 is aimed at public awareness and understanding of coastal hazard risk:

> *The ARC will develop and carry out educational strategies aimed at providing the general public with a greater understanding of risks associated with natural coastal hazards, and how these risks are being addressed throughout the Region.*

This is an area not covered by the NZCPS policies.

Method 21.6.4 is an application of NZCPS Policy 3.4.3 in that "active involvement of local communities in developing and implementing coastal hazards management programmes" would encompass natural feature protection.

Method 21.6.5 states:

> *The ARC will support the development of Comprehensive Coastal Management Plans which take an integrated approach to managing hazards which occur within the coastal environment.*

This is a method for working towards implementation on the ground of coastal hazard and other policies in this plan. This is an area not covered by the NZCPS policies. Several such studies have been undertaken by the ARC with different territorial authorities in their region (see section 3.2.2 in Volume 1 of this report).

Method 21.6.6 is an extension of Method 21.6.1 involving research on sea level rise.

Method 21.6.7 states that District Plans should contain appropriate provisions to implement the policies in this chapter.

These policies and methods are followed by Principal Reasons that give explanations for each policy or group of policies. There are specific references to many of the coastal hazard related NZCPS policies that are covered by this review (but not to as many as are actually addressed by the plan provisions).

The Anticipated Environmental Results state the goals of: avoidance or mitigation of coastal hazards by way of design and location away from coastal processes; avoiding adverse effects when coastal protection is undertaken; and protection of natural features which are a buffer to coastal hazards. It does not extend to stating achievable, measurable goals for the Auckland region such as a reduction in risk where there is existing development. It therefore shares the NZCPS's lack: there is no outcome vision for existing hazard prone communities.

Chapter 12: Structures contains the rules for structures in the coastal marine area of the Auckland region. Interestingly, the objectives and policies in this chapter are also described as applying to the coastal marine area (as opposed to the coastal environment). This is in stark contrast to the objectives and policies in the Natural Coastal Hazards chapter reviewed above.

The Structures objectives and policies include Policy 12.4.10, which sets out in more detail what is required of any proposal for a coastal protection structure. This completes the scheme of NZCPS Policy 3.4.6 by including that "Any proposal shall demonstrate that … doing nothing, or abandoning or relocating any landward development or structures, are not practicable options."

Rodney District Plan

The Rodney Proposed District Plan 2000 is not yet operative.

The Rodney plan is notable for not identifying coastal hazard zones. It shares this characteristic with the plans of 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. It is therefore difficult to judge whether the policies are addressing the particular issues that arise with coastal hazards.

The most relevant chapters are: Chaper 5: Natural Hazards, Chapter 6: Highly Valued Natural Resources, Chapter 7: Rural, Chapter 8: Residential, and Chapter 12: Special Zones.

In Chapter 5 both erosion and inundation by the sea are identified as coastal hazards affecting the district. Cliff instability, ie cliff erosion, is another widespread coastal hazard along the soft coastal cliffs. In Issue 5.2.1, the potential for hazards to have serious social and cultural costs in addition to the more usually recognised economic and environmental costs is put strongly:

> *The social and cultural costs are … not easily measured. These include psychological distress and a sense of dislocation, especially if lives or homes are lost, or community structures are damaged or destroyed. This has implications for the wider community.*

Issue 5.2.2 includes a recognition that mitigation measures such as seawalls can increase hazard by creating a sense of security and more intensive development, despite the potential for the protection works to fail. There is no recognition of the effects of seawalls on beaches.

Objective 5.3.1 is in accord with NZCPS Policy 3.2.2 in creating a hierarchy of avoidance of the adverse effects of natural hazards where possible.

Objective 5.3.2 is a non-specific protection of natural processes: "To avoid natural hazards being exacerbated through changes to natural processes as a result of inappropriate subdivision, use and development."

Policy 5.4.1 continues the approach of avoidance in stating that "In areas prone to natural hazards, activities which are sensitive to those hazards should , where possible, be avoided. Where this is not possible, activities should ensure that any risk of loss of life or injury or environmental damage is minimised through appropriate mitigation or remedial measures." This policy is particularly non-specific, especially in the light of an absence of identified hazard areas and rules with assessment criteria that would trigger consideration of such a general policy.

In dealing with public land, Policy 5.4.3 is far more specific in requiring that natural systems should be used, maintained, managed, enhanced or protected where they make a significant contribution to avoiding, remedying or mitigating natural hazards, especially…natural coastal features such as sand dunes, saltmarsh, and mangroves to limit coastal erosion. This gives effect to NZCPS Policy 3.4.3 and is accompanied by an explanation.

Policy 5.4.4 addresses, but does not quite give full effect to NZCPS Policy 3.4.6:

> *In the case of … coastal defence works, soft engineering techniques, such as dune stabilisation and beach nourishment, should be adopted where they are effective and practical, in preference to hard engineering techniques, such as foreshore protection works (eg. the dumping of rocks, concrete, car bodies, tyres and other spoil, walls, rip rap/gabion baskets and groynes).*

This policy is notable for including the use of car bodies, tyres and spoil as techniques that would, implicitly, be acceptable if soft engineering techniques are not effective and practical.

Policy 5.4.5 states: "Where there is little information available about the hazard, including the effects of sea level rise and global climate change, a precautionary approach should be taken in avoiding, remedying or mitigating the adverse effects of hazards on development."

On the face of it, this policy addresses the precautionary approach in NZCPS Policy 3.3.1. However, in relation to coastal hazards, a precautionary approach will continue to be required even if there is more than "little information" because of the complex nature and uncertainty of coastal processes. The policy is also notable in addressing only the adverse effects of hazards on development, and not also addressing the potential effects of development on hazards and the environment.

In 5.5 Strategy, a strong case is made for taking a long term view in natural hazard avoidance and proposes both regulatory methods (development controls) and non-regulatory methods such as:

> *the provision of information on hazards … to help communities and developers to take responsibility for not developing in hazardous areas or exacerbating natural hazards …*

In 5.6 Implementation of the Hazard Strategy, zoning is proposed as a technique, including a Physical Limitations Zone. Council staff advise that there are no coastal examples of this zone.

Effects-based activity rules and development controls such as shoreline yard restrictions are the primary methods proposed where part of a zone is prone to a hazard.

Chapter 6: Highly Valued Natural Resources contains many protection policies, but none with specific recognition of the effects of hazard protection works on the coastline landscapes.

Chapter 7: Rural contains policies such as Policy 7.4.8 that could be read as protecting dunes and natural coastal processes but are not primarily or specifically directed at coastal hazards.

Rural Rules set shoreline yards of between 50 and 200 metres.

Chapter 8: Residential contains a greenfields subdivision policy with no reference to coastal hazards in Policy 8.4.12, which is followed by Policy 8.4.15 stating that:

> *Residential subdivision and development should be located and designed to avoid, remedy or mitigate and not exacerbate the on-site or off-site adverse effects (including cumulative effects) of natural hazards such as geological instability, erosion and siltation.*

This policy gives effect to NZCPS Policy 3.4.5 apart from a focus on avoidance and any reference to avoiding protection works and the potential effects of protection works. It addresses cumulative effects in relation to coastal hazards in accord with NZCPS Policy 1.1.1(c).

The Chapter 8 Residential Rules include a shoreline yard of 23 metres (presumably a 20 metre quasi reserve width plus 3 metre residential yard).

There are complex tables to control development in a plethora of residential zones (but none of them identified as prone to coastal hazards). The rules have the effect of allowing buildings and a single dwelling anywhere landward of the shoreline yard, but with a consent required everywhere for multiple dwelling units (except in the high density zone).

There is no specific activity category covering protection works such as seawalls.

Finally, Chapter 12 includes 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 along with Rodney district consents in section 3.2.3 of the main report, and in appendix 9 in this volume, as this special zone is in the nature of a private plan change undertaken as an alternative to a consent for a specific subdivision.

Future directions already signalled

There are no proposals to alter the scheme of the Rodney District Plan to specifically deal with coastal hazards, or to give effect to NZCPS Policy 3.4.1 by identifying hazard areas.

In its Coastal Management Strategy Review, adopted 30 June 1999, The Rodney District Council stated explicitly:

> *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.*
>
> *"Nor does the Council intend, as a general rule, to carry out studies of sediment dynamics, of tidal current patterns, of storm events and surges, of the long term effects of sea level rise and other climate change events, or to construct other than relatively minor erosion control works. Studies of the sort mentioned are primarily the responsibility of the Auckland Regional Council and others and insofar as erosion control works are concerned, the only exceptions will be when the risk to property and to buildings, if there is no intervention, is wide ranging and/or significant.*

This appears to be effectively a charter for not planning ahead, other than with ad hoc assessments prepared for owners and developers for advancing individual projects, 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 on the basis that hazard zones would:

- be a retrospective imposition on landowners who have purchased land free of any such encumbrance;
- have adverse effects on insurance of properties and property values;
- likely be challenged in the courts at considerable cost to ratepayers;
- initiate liability claims against the Council; and
- provide limited benefit given the already built up nature of the areas and the existence of seawalls.

Building consents are granted on the basis of owner risk. (This apparently relies on the Building Act section 36(2).)

In addition, council staff advised the reviewer that higher priority for the Council effort is to achieve good outcomes for greenfield sites such as Omaha South. Greater benefit is seen from getting greenfield development right, and Council can come back to existing areas later – when precedent cases elsewhere will have clarified robust methodologies and Council duties, and hence challenges to hazard zoning are less likely.

Indeed, the Omaha South subdivision appears to be a demonstration of the achievable benefits of putting Council resources into careful control of greenfield subdivision and development.

In the interim, coastal hazard management planning for existing hazard prone settlements in Rodney district will rest on shoreline yards, a register of individual assessments, building consent applicant assessments sought on a case-by-case basis, and building consent conditions.

The 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 (similar to the concept of preparing management plans for reserves pursuant to the Reserves Act 1977).*

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, only general references to management of coastal hazards are made.

In Chapter 3: Long-term Coastal Processes, the coastal compartment plan makes reference to general trends of erosion and accretion, but no action other than ongoing monitoring and the maintenance of existing groynes and seawalls is proposed.

In relation to sea level rise and climate change, the coastal compartment plan states:

> *Seawater flooding could be caused in two ways:*
> - *Some low-lying coastal property might be flooded at high tide.*
> - *Beach front properties on the ocean side of the spit might be flooded more frequently during storm events than they are at present.*
>
> *This issue is not specific to the Omaha compartment and coastal and riparian land around Rodney and the rest of New Zealand would be affected.*

Curiously, the only action in response to these potential effects of sea level rise and climate change is to "Address climate change and sea level rise in the Coastal Management Strategy" which is the general document cited above, that states it will not seek to address coastal hazard issues until the risk to property is wide ranging and/or significant.

In contrast, Chapter 4: Dune Management in the coastal compartmwent plan begins with:

> *By far the biggest concern to the local community is the protection of private property from coastal processes, and the best way to achieve this is through maintaining a healthy and functioning beach and dune system.*

Chapter 4 goes on to address dune management in detail.

However, in the absence of identifying the areas that are subject to coastal hazards, there is little prospect of an integrated approach to dealing with coastal hazard management developing from this or other coastal compartment plans.

Appendix 9

Analysis of Consents in the Auckland region

This appendix supports section 3.2.3 of the main report. It contains a more detailed analysis of the following consent processes in relation to the coastal hazard related NZCPS policies:

- 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.

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 destroyed the timber seawall constructed to protect the large new subdivision, and also washed away substantial parts of the titles created, along with some development.

The Omaha South subdivision considered here is at the base of the Mangatawhiri Spit, further from the spit tip than the 1970s subdivision. It is noted, however, that development has already proceeded on the other side of the 1970s subdivision (ie closer to the spit tip) following the construction of groynes to stabilise the spit tip, 400,000 m^3 of beach nourishment, and the construction of a beach front wave run-up barrier (only in front of the original development).

The Omaha South proposal made in 1998 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, who sought a coastal hazard assessment from Tonkin & Taylor Ltd that was delivered in July 1998 *Omaha Development Revised Coastal Hazard Assessment.*

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

Tonkin & Taylor considered that their approach and underlying assumptions were conservative, and provided a precautionary approach and a conservative setback.

The setback thus derived varies from 59 metres to 72 metres, which fairly closely corresponds with the wide esplanade reserve already in existence.

In the Boffa Miskell application, this is referred to as a 'buffer area' and is demarcated by a 'coastal hazard line'. The only activities recommended for the area seaward of the line are dune management and formalised beach access points. The coastal hazard line or the boundary of the esplanade reserve (whichever was more landward) was to be fenced for further protection.

In addition, the applicant would revegetate a large part of the esplanade reserve with 'appropriate native species' and would contribute $50,000 over five years to assist in the establishment and operation of a 'beach care programme' for the whole esplanade reserve beside the subdivision.

The relevant components of this subdivision proposal became provisions in the Special 16 Zone in the Rodney District Plan.

While there could also have been explicit provision for natural feature protection as well as coastal hazards in an integrated development setback, the outcome does represent the implementation of NZCPS Policy 3.4.2, 3.4.3, 3.4.4 & 3.4.5 on the basis of a 100-year planning horizon for a greenfield coastal subdivision.

The apparently conservative, precautionary approach (in accordance with NZCPS Policy 3.3.1) probably provides additional setback that will provide additional protection for natural features, amenity values, recreational values, and natural character (NZCPS Chapter 1) and/or provide coastal hazard protection for a period longer than 100 years.

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 prices of the allotments.

Despite little direct reference to the coastal hazard related NZCPS policies in the consent documents reviewed, it is not unreasonable to speculate that 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. That role would have been assisted by the severe erosion damage to the subdivision of the neighbouring beachfront area in 1978, the existence of the wide esplanade reserve, and the advantages to the developer of providing a hazard free and high amenity subdivision (as discussed above) in an area well known for its coastal hazards.

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.

Of the files found for beachfront activity consents, only two appeared pertinent to this review.

L34507 was a consent granted for a seawall at Scott's Landing. The reasons given for granting consent include that:

> *Given that the toe of the new seawall will be located above Mean High Water Springs, it is most unlikely that the proposal will increase the level of scour caused by reflection of wave energy off the seawall.*

The effects of the seawall addressed in the report are otherwise limited to visual and landscape effects, with a reference to proposed District Plan objectives and policies that "seek to prevent development that would adversely affect the quality of significant or highly valued landscapes".

For this small private seawall there is no reference to policies in the proposed District Plan concerning coastal hazards, or to the NZCPS.

L32956 was for a new dwelling infringing a 6 metre shoreline yard.

There is no reference to coastal hazards in the reasons for granting consent or the report.

In the Resource Management Act section 94 assessment, one reason given is that the retaining wall will be constructed above the Mean High Water Springs mark and will not adversely affect the coastal environment.

Little can be inferred from this consent in the absence of hazard information.

In summary, such consents do not indicate a strong penetration of the coastal hazard related NZCPS policies into the processing of minor consents.

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 and/or setbacks is a permitted activity in the district, control of development is achieved primarily through Building Act consent requirements and/or conditions.

In essence, Council staff consider that 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.

Council staff are aware from the hazard register of the hazards that have been identified in the vicinity (if there is a recent hazard assessment) and site inspections for hazards are undertaken by engineering and consent staff. Staff are aware of the coastal hazards at different locations, and use 'generic hazard reports' and rule of thumb for assessing the level of hazard that is likely to exist, for example:

- cliff regression in Waitemata sandstone, eg Maharangi, Whangaparaoa (3–5 metres/over 100 years);
- land slumping problem at Snell's Beach, Algies;
- coastal flooding at Orewa, Manly; and
- coastal erosion at Omaha, Tindell's ($100m^3/m$ sand storage provides buffer).

Building consents include measures such as location within the property, and long piles to avoid loss of sand support if erosion affects stability.

There is apparently little resistance to such measures (in contrast to coastal hazard lines in the District Plan). Council staff consider that it is mainly property value anxiety that would lead to litigation by property owners.

This reliance on building consents to control development in potentially hazard prone areas is outside the integrated approach promoted by the RM Act and the NZCPS. (See Appendix 6 *Bay of Plenty RC v Western Bay of Plenty DC A27/2002*: Building Act controls are not a substitute for District Plan controls.)

Appendix 10

Analysis of the Policy Statement and Plans in the Greater Wellington Region

This appendix supports section 3.3.2 in the main report. It contains a more detailed analysis of the coastal hazard related provisions in the:

- Wellington Regional Policy Statement;
- Wellington Regional Coastal Plan;
- Kapiti Coast District Plan; and
- Masterton and South Wairarapa District Plans.

Regional Policy Statement for the Greater Wellington region

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

The regional council has focused a lot on river flood issues in the past and this appears to be reflected in a focus in the policy statement on flooding. There are many general policies that could be used in guiding the assessment of coastal hazard management proposals, but these give little specific guidance on how to meet the particular challenges of coastal hazard management.

Relevant policies are contained primarily in two chapters: Chapter 7: Coastal Environment and Chapter 11: Natural Hazards.

The introduction to the Coastal Environment chapter recognises the special role of the coastline as a "focus of human activities and aspirations".

The omission of erosion and storm inundation from a list of events in Coastal Environment Policy 6 that have low probability but the potential to create major adverse effects is notable given the situation on the Kapiti Coast. (There is no corresponding policy for events with higher probability.)

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, although Natural Hazards Method 4 sets out an intention to identify susceptible areas, while Method 15 identifies district plans as the appropriate place for hazard areas to be identified.

Natural Hazards Methods 7 and 8 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 is an example of the Greater Wellington Regional Council getting involved in identification of hazard areas and in integrated coastal management.)

One interesting point is that Method 4 explicitly recognises the desirability of distinguishing between long-term trends of coastal erosion and short-term fluctuations, on the basis that they require different responses and forms of management.

Natural Hazards Policy 4 is notable because it seeks to ensure that, before activities which will modify the environment 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 forward-looking scenarios detailing the likely effects, for example, of seawalls on beaches and of the intensification of development behind seawalls.

Tsunami risk is discussed and, perhaps because of tsunami or river flooding concerns, 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 plan. It became operative in May 2000.

It is also the only regional plan assessed which has chapters 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, with little more than reference to effects that cross MHWS. This is reflected in the tables, Tables 3.3.1–3.3.5, which show many NZCPS provisions that address management of land features and activities are not covered by this plan. As can also be seen from the tables, the more general Regional Policy Statement, with its Natural Hazard chapter focused primarily on river flooding, also does not explicitly address many of the NZCPS coastal hazard provisions.

The chapters of greatest relevance to coastal hazard management are Chapter 4. General Objectives and Policies and Chapter 6: Structures

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.

There is a general vision for natural hazards to "not increase risk from natural hazards beyond an acceptable level". This is not defined for the Wellington region, and outcomes could not readily be measured against it.

There is no discussion or definition of the term 'risk from natural hazard', ie whether it should extend to risks from hazard responses, risks to the environment, and risk from more intensive development, or whether it refers only to the risk to built assets from hazard events.

The plan addresses the likelihood of sea level rise, with reference to Intergovernmental Panel on Climate Change predictions.

This plan identifies coastal hazard protection works and their effects as a MHWS cross-boundary issue, but goes no further than that. The plan confines itself to identifying that protection works can have adverse effects and should be used only where they are the sole feasible option, and that ad hoc protection works are to be discouraged. It leaves the management of coastal hazards on land to the District Councils.

Coastal protection works in the coastal marine area are generally discretionary activities.

Kapiti Coast District Plan

The Kapiti Coast District Plan coastal hazard provisions are founded on hazard zones which are based on (but do not correspond with) the coastal hazard assessments of Dr Jeremy Gibb in the late 1970s. These assessment were made following a series of storms in 1976 that caused damage in Raumati.

The District Plan coastal hazard zones are not as wide as recommended by Dr Gibb at that time, nor were the seawalls constructed at Raumati following the 1976 storms constructed to their full design height.

At the time the District Plan became operative in July 1999, the coastal hazard zones had not been updated or extended following further recommendations by Dr Gibb in his 1994 report '*Sustainable Management of the Coastal Environment administered by the Kapiti Coast District Council*, March 1994', nor had the seawalls been upgraded to the design for the level of threat identified in 1978.

(The May 2003 draft Kapiti Coastal Erosion Strategy is intended to lead to District Plan changes. This draft strategy is reviewed in section 4.4 of the main report, with more detailed comment in Appendix 13 of this volume.

As with the Regional Policy Statement, flooding is identified as the most significant natural hazard. The significance of coastal erosion and seawalls on the character of this coastal district is not highlighted, despite the recognition of the importance of the coast as an asset and recognition that its "uniqueness is due in many respects to its undeveloped and 'wild' nature".

The chapters of greatest relevance to coastal hazard management are: C9. Coastal Environment, C15. Natural Hazards and D. Residential Rules.

Coastal Environment Policy 3 is a policy for residential buildings: "In respect of residential buildings, control the location of buildings within areas subject to coastal erosion".

Policy 4, covering coastal protection works, is to: "Discourage coastal protection works … where they are not already present, and encourage options such as managed retreat and nourishment rather than hard protection works…". This policy is not consistent with NZCPS Policy 3.4.6.

There is no policy in accord with NZCPS Policy 3.2.2 requiring avoidance of effects as far as practicable in the coastal environment.

The Coastal Hazard introduction in the Natural Hazards chapter is a summary from a report to the Council by Dr Gibb in 1994. It includes the reiteration of the 1980 advice from Dr Gibb that "Clusters of severe on-shore storms from the northwest can take 'bites' out of the shoreline as great as 40–50 metres". This is in contrast to the primary risk 'no-build' hazard zone of 20 metres width.

Under 'Responses to Coastal Hazards' the NZCPS chapter 3.4 policies are referred to but not repeated, and only NZCPS Policies 3.4.5 and 3.4.6 are elaborated on for the Kapiti Coast situation.

The one objective in relation to natural hazards is "To manage activities and development within natural hazard prone areas so as to avoid or mitigate the adverse effects of natural hazards." This objective does not go beyond the requirements of the Resource Management Act, and does not give effect to the NZCPS Policy 3.2.2 hierarchy favouring avoidance.

Hazard Policy 1: "Permit subdivision and development where the effects of natural hazards can be avoided, remedied or mitigated" similarly recognises no NZCPS Policy 3.2.2 hierarchy for avoidance and mitigation in the coastal environment.

Policy 3: "Ensure appropriate uses, zones and performance standards are developed for areas known to be liable to … coastal erosion…" is in accord with NZCPS Policy 3.4.1 in identifying areas where coastal hazards exist.

Policy 5: "Promote community awareness of natural hazards to encourage avoidance of adverse effects of hazards" picks up on the focus in the regional policy statement and plan on community awareness that is not covered in the NZCPS. There is recognition in the introduction that coastal hazard responses can create or exacerbate hazards and have adverse effects on beaches.

Policy 7 is to:

> *Avoid and/or mitigate the potential adverse effects of ... erosion from ... the sea on:*
> - *human life, health and safety*
> - *private or community property*
> - *flood mitigation works*
> - *other natural and physical resources*
>
> *when planning for and making decisions on new subdivision, use and development ... adjacent to the sea*.

This policy addresses matters akin to those in NZCPS Policy 3.4.5 in relation to new subdivision, use and development, but again does not favour avoidance over mitigation or make any reference to a goal of avoiding the need for protection works.

Policy 8 : "Recognise the ability of natural features (such as sand dunes) to buffer development from natural hazards through performance standards including minimum setbacks for new and relocatable buildings" addresses NZCPS Policies 3.4.2 & 3.4.3 in part by recognising the ability of natural features to protect development, and seeks to protect their integrity. There is no reference to enhancing the buffering function.

There are no policies addressing inundation by the sea or tsunami.

The Kapiti Coast District Plan rules specify subdivision as a controlled activity throughout the Residential Zone subject to standards that include a flood free building site. There is no corresponding standard requiring a coastal hazard free site.

The permissive subdivision rules are based on avoiding duplication of subdivision controls contained in section 106 of the Resource Management Act, whereby the Council shall not grant a subdivision consent if land is "likely to be subject to material damage from erosion" … unless effects will be avoided, remedied or mitigated by district plan rules, consent conditions, or works. (See the review of Wellington region consents in section 3.3.3 of the main report for an insight into the consequences of this approach.)

The Rules contain development standards specific to the coastal hazard zones. The identified coastal hazard area in the Residential Zone is divided into a 20 metre 'no build' zone with a 30 metre wide 'relocatable' zone behind it along those areas south of Paraparaumu historically subject to a trend of erosion.

The rules controlling development in the residential coastal hazard zones specify:

- buildings as a non-complying activity in the 'no build' zone;
- buildings as a permitted activity in the 'relocatable' zone, subject to the building being of a relocatable design; and
- multiple dwellings as a permitted activity provided that the total area of the property (including the area in the high risk hazard zone) would, if subdivided, provide ordinary residential lot sizes for each dwelling.

The permissive rules for multiple dwellings are the result of two related rule provisions:

- the controlled activity subdivision standards omitting any requirement for sites to be free of coastal hazards; and
- using the controlled activity subdivision standards being cited as the permitted activity standard for multiple dwellings.

The requirement for relocatable design (as opposed to practicable relocatability) means that there would be difficulties moving many 'relocatable' dwellings.

In the Rural Zone, there is a 100-metre coastal yard setback to deal with coastal hazard and other natural character issues.

The Masterton and South Wairarapa District Plans

Masterton District Plan provisions

The Masterton District Plan is operative and reveals little penetration by the NZCPS in relation to coastal hazards or the more recent concepts of coastal hazard management that have developed alongside the NZCPS. The plan has picked up many of the general provisions from the Wellington Regional Policy Statement, which focus on flooding or general process policies.

In the Management Strategy part of this District Plan, the first objective is: "The avoidance or mitigation of the adverse effects of natural hazards on the environment as appropriate to the circumstances, with priority on community protection." There is no discussion or explanation of the term "community protection".

A Natural Hazard Area has been identified as a 60-metre band around the coast from MHWS, except for Castlepoint where it is 30 metres wide, and Riversdale where a varying width band is mapped. Buildings, vegetation clearing and earthworks are a discretionary activity in a Natural Hazard Area.

Outcomes sought include the avoidance of inappropriate subdivision, use and development, in recognition of the sensitivity of the coastal environment, including the potential for sea level rise. Another outcome is the provision of appropriate measures to avoid or reduce coastal hazards (it is not clear if this is a reference to coastal hazard risk).

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 (which is probably not assisted by the lack of uptake in the Wellington Regional Policy Statement).

South Wairarapa District Plan provisions

No analysis table has been completed for the South Wairarapa District Plan in this review. 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 coastal management objective in relation to hazards is limited to "mitigation of coastal hazards", and in regard to policies is limited to "To ensure that development does not take place in coastal areas presently subject to erosion…"

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

Appendix 11

Analysis of consents in the Greater Wellington region

This appendix supports section 3.3.3 of the main report. It contains a more detailed analysis of the following consent processes in relation to the coastal hazard related NZCPS policies.

Kapiti Coast district:
- The Water's Edge subdivision temporary seawall, Manly St, Paraparaumu – Wellington Regional Council consent;
- The Henry subdivision at 41–45 Wharemauku Road – Kapiti Coast District Council consent.

Masterton district:
- Mataikona seawall – Wellington Regional Council consent

South Wairarapa district:
- Te Kopi Boulder Beach – Wellington Regional Council

The Water's Edge subdivision temporary seawall – Greater Wellington Regional Council

Background

This 1989 subdivision of four dwellings, called the 'Water's Edge subdivision', sticks out towards the sea from the long line of other dwellings along Manly Street in Paraparaumu. This is because of a wide reserve/road reserve everywhere except along this large previously undeveloped (small scale 'greenfield') property, plus beach accretion since the development of the other subdivisions along Manly Streets over the previous 20–30 years.

A high risk '20-metre no build' coastal hazard line was in place from 1980 to deal with short-term fluctuations. This followed advice from Dr Jeremy Gibb that "any part of the Kapiti Coast foredune was subject to short term fluctuations of the order of 40 to 50 metres from … clusters of severe on-shore storms…"

Subdivision consent was granted with no detailed analysis of the hazards in the application, largely on the basis that there had been substantial net accretion over the last 100 years, including over the previous 20–30 years since residential subdivision intensified. (Greater Wellington Regional Council staff advise that aerial photos show the subdivision site was eroded in the 1950s – pers comm..)

To its credit, Kapiti Coast District Council had tried to buy, and had almost succeeded in buying, the whole subdivision site so that the wide reserve on each side could be connected and residential development set back with the dwellings on each side. When that failed, the Council took the entire reserves contribution from the large subdivision as a 9-metre wide reserve to add to the 20-metre esplanade reserve from the surveyed line of MHWS.

1989 must have been a peak accretion point in short-term fluctuations, because the new dwellings (set back the minimum 3 metres from the seaward property boundary) still straddled the 20 metre no-build line inserted into the district scheme in 1980. The Council advised the Parliamentary Commissioner for the Environment, in response to a complaint, that the building consents were granted nevertheless because the dwellings were more than 20 metres from the MHWS line.

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 consent

A proposal for a temporary seawall was developed by the property owners with the assistance of the coastal engineer, John Lumsden. The seawall design was a double layer of large concrete blocks on geotextile.

The proposal 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 on 17 June 1999, and the works to construct the seawall began the next day on 18 June 1999 with the permission of the WRC Consents Manager on the basis that they were "urgent to protect the integrity of the four houses", and non-notified consent was granted on 28 June 1999.

The work was undertaken by the Kapiti Coast District Council. No land use consents were obtained for the earthworking of the dune behind the seawall.

Under the Proposed Regional Coastal Plan, the seawall was a discretionary activity.

The officer report cites the Proposed Regional Coastal Plan Policy 5.3.1.3 which seeks to discourage ad hoc shore protection structures, and continues "This resource consent allows the seawall as a temporary structure providing time to investigate feasible alternatives and so is in keeping with the intent of Policy 5.3.1.3".

The officer report considered that the proposal was consistent with the Regional Policy Statement coastal environment objectives and policies which "are generally concerned with preserving the natural character of the coastal marine area, maintaining water quality, and avoiding, remedying or mitigating any adverse effects upon the coastal marine area."

No reference is made to the NZCPS, and the brief discussion of the effects of the seawall on natural character states that:

> *The block seawall will alter the natural character of the beach … However, the structure is interpreted as being necessary to protect the houses, and the residents intend to establish ice plant and marram grasses along the sand near the blocks to help it blend with the natural surrounds*.

John Lumsden has stated that given the existence of the subdivision, as well as various stormwater drainage outfalls crossing the beach, the natural character of the site may be considered to be already compromised to some extent and the blocks will have no significant additional impact. I concur with this statement.

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.

The *Henry* subdivision at 41–45 Wharemauku Road, Raumati – Kapiti Coast District Council

The applicant first sought a subdivision consent. The officer report focused on the RMA 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 (see section 3.3.3 in volume 1 of this report), in that there was a substantial area of land outside the (out-of-date) District Plan hazard zones. 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 highly developed valuable residential property would represent material damage.

As with the 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. The applicant also took advantage of the District Plan provisions to apply for a resource consent and building consent for the family home he wished to build on the proposed new subdivision allotment.

As with the Rosetta Road case, a dwelling was a permitted activity to within as little as 11 metres of the edge of vegetation on the eroding dune (because half the no-build zone had already been taken by erosion), provided only that the building was of relocatable design. While the proposed dwelling was a discretionary activity because it did not meet certain side yard and envelope requirements, neighbour consents and the permitted baseline approach meant there was no reason to refuse resource consent for the dwelling.

Notably, the dwelling extended only 10 metres into the (out-of-date) 'relocatable' hazard zone when it could, as of right, have extended a further 20 metres to within 11 metres of the beach.

The dwelling was a substantial two storey dwelling over 30 metres long with an estimated value for the building consent of $500,000. There would be limited opportunity to relocate this dwelling within the section should further erosion threaten the dwelling.

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

As with the Rosetta Road case, the controlled activity status of the subdivision meant that NZCPS policies and other RMA Part II considerations were not relevant to this application. The Environment Court had only section 106 to consider.

In its decision, the Court considered the evidence of erosion and the difference between what Council's expert witness considered prudent for development of the site (relocatable buildings in the moderate risk zone) and what had already been granted consent.

The Court was of the opinion "that the difference … is small, particularly given that consent has already been granted for the dwelling, which is in the process of being built. Any risk of damage to that building by erosion or inundation will not be increased or decreased by our decision on this application."

The applicant's solicitor submitted that "even if 50 metres of land were to disappear, the [seaward lot] would still be approximately 1000 m^2 as compared with the minimum lot size of 550m^2 … under the District Plan." (This would involve loss of part of the dwelling.)

The Council's solicitor submitted that it was "important to bear in mind that the damage that the Council considers likely is actual physical *loss* of the land and potentially of structures through coastal erosion. In authorising the creation of a new allotment, subsequent coastal erosion could substantially reduce it not only in size and function, but also in value."

The Council did refer to the NZCPS, as reported in the judgment:

> *While [Council's solicitor] noted that the NZCPS cannot be directly relevant to the interpretation of section 106, he submitted that the Court is entitled to give some weight to the precautionary principle in the NZCPS [and referred to General Principles 7 and 12] … He submitted that the NZCPS offers additional support for a cautious approach in this instance.*

The Environment Court concluded that "the land is or is likely to be subject to material damage by erosion or inundation." The Court then went on to conclude that:

> *We are satisfied 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 …*
> *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.

Despite the District Plan policy to take esplanade reserve along the entire coastline, no esplanade reserve was taken in this instance.

Mataikona seawall – Greater Wellington Regional Council

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

The road running north from Castlepoint, at the Whakataki rivermouth to the Mataikona river, services small coastal settlements and farms. The road runs along the coast on a typically narrow strip of flat, low-lying land between hills and the sea.

The Whakataki–Mataikona foreshore is identified as an 'Area of Important Conservation Value' in the Wellington Regional Coastal Plan: "Geological features of regional significance – tongue and groove shore platform at Whakataki, significant habitats for wildlife".

This section of coast is also a 'Conservation Management Area' in the Masterton District Plan.

Where the road 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, part of the road was lost to storm erosion, and soil and rock fill material was placed down to high tide level as a temporary protection measure.

Opus International Consultants were commissioned by Masterton District Council to investigate options for protection of the Mataikona coastal road at Okau Stream.

The Opus report *Mataikona Coastal Protection*, November 1999, describes the existing conditions, including IPCC predictions for sea level rise adjusted for New Zealand, and then sets out a comprehensive range of alternative options for this location.

'The Design Options' section begins with a brief comparison of 'soft' and 'hard' (structural) options. Comment on the advantages of 'soft options' is limited to:

> *The major advantage of a 'soft' preservation method … is that effects of the scheme on the surrounding morphology are minimised*.

There is no mention of natural character or 'special qualities of the Wairarapa coast'.

The options investigated included beach nourishment and a short realignment of the coastal road away from the shoreline. Another option was to extend a private road (that had been constructed inland by residents for access to their properties) to create an inland bypass.

The 'hard' options included a rock revetment.

The options are briefly discussed in the Opus report, and the costs of options considered 'suitable for application at this location' were calculated using a 'life-cycle analysis' to enable comparison between options. The costs compared are purely financial costs.

Beach nourishment was apparently considered suitable, and a ready source of material was slip material of beach compatible material. Nourishment would be ongoing, and reinstatement of the road

would be required after exceptionally erosive stormy periods. This was the cheapest of the costed options, requiring no initial capital investment and with a 50-year total life cycle cost of $45,000. This was just one third of the $130,000 life cycle cost of the rock revetment.

The rock revetment was preferred both for reasons of cost and appearance. "Natural [locally sourced] rock can provide an appearance that is in keeping with the general appearance of the area."

In regard to the 'link to private Road' option, the report states "the eroding section of coastal road could be avoided. The dynamic movement of this section of coastline could then continue." The report goes on to say:

> *This option may pose some difficulty with residents in the area as their property boundaries cross the private road. However, if it were acceptable, this option would provide a sustainable solution for maintaining the road access, with further works not required in the short term and possibly not ... in the long term.*

The 'link to private road' option was costed at $223,000, including $40,000 for land purchase.

The report concludes with two recommended options:

- *The most cost effective of all options over the 50 year design life is to [undertake] beach nourishment, and rebuild the road in the event of a wash-out. This assumes it is acceptable to the road users and the Council that the road may be impassable for periods following a storm event.*

- *The most cost effective structural option is to provide a rock revetment along the eroding section of road. If the revetment option were selected, it would be beneficial to ... carry out beach nourishment as well [when beach-compatible slip material is available]... This may reduce the maintenance required and would benefit the littoral regime in the area.*

The consent

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

The September 2000 application was for 300 metres of rock revetment. It was deemed to be in the coastal marine area and thus required a discretionary activity coastal permit. (This is despite the statement that: "Works will be constructed to the rear of the beach area, which will minimise their impact on coastal processes.")

Consideration of alternatives in the application is brief:

- *… If the private road were extended … it could provide a link with Mataikona Road and remove the requirement to maintain the present road. However, the private road … divides the private properties and the local residents are understood to be not in favour of such an option*.

- *… [Beach nourishment] would forestall erosion of the road embankment by providing material for erosion. However, used in isolation, during exceptionally high energy events the road may require reinstatement as well as further beach nourishment*.

In addressing actual or potential environmental effects, it is stated that in the light of the area of coast affected being both an Area of Important Conservation Value and a Conservation Management Area:

> *… special consideration is given to the avoidance of inappropriate development, and the maintenance and enhancement of the natural character of the environment.*

Measures to mitigate the effects of the seawall construction are then listed, before statutory considerations are addressed.

In relation to the NZCPS, 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.

In relation to the Wellington Regional Coastal Plan, the many general objectives and policies that may be of relevance are cited, followed by the brief comment:

> *The proposed coastal protection works are generally in keeping with these objectives and policies, in that they look to maintain and enhance access, while preserving the amenity values and the natural and physical resources of the coast.*

The Structures policies cited include Policy 6.2.3 in the Regional Coastal Plan:

> *To discourage the development of ad hoc shore protection structures; and to not allow the development of seawalls, groynes, or other 'hard' shore protection structures unless all feasible alternatives have been evaluated and found to be impracticable or to have greater adverse effects on the environment.*

The assessment against the Structures policies is that:

> *The proposed structures are in keeping with these objectives and policies. The proposal will ensure that public access, to provide for economic and social well-being, is maintained to this area of the coast. All feasible alternatives to this proposal have been evaluated and were found to be impracticable or present greater adverse effects.*

Reference is made to consultation, and the Department of Conservation submission is attached. That submission includes:

> *Ideally an alternative road alignment would be promoted (for example the link with the private road) so the need for the hard coastal protection works is avoided.*

and

> *… If the proposal is carried out in a sensitive manner, so as to minimise effects on the natural character of the coastal environment, the Department will not have any concerns about the application being granted.*

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

The officer report refers to the Department of Conservation preference for avoidance by way of the bypass link road, but considers "this would involve complex and costly procedures not considered justified in the circumstances."

In consideration of RMA Part II, 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 …"

In assessing the rock revetment proposal, the officer report states that the particular shore platform 'tongue and groove' geological feature will be unaffected and that: "Rock revetment is the preferred option by the applicant as it provides the most cost effective and practical structural protection to the existing road."

Consent was granted.

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.

There is a taiapure adjacent to the site, apparently concerned only with fin fish species that inhabit the open water offshore.

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 protection works by individual property owners (with materials ranging from tyres to concrete), the baches did indeed fall 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 for protecting the road from the high energy wave environment, or for finding an alternative route for road access.

The consent:

The application from South Wairarapa District Council to the (then) Wellington Regional Council was received in September 2002, supported by a substantial Assessment of Environmental Effects prepared by Beca Carter Consultants.

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.

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.

This is clearly in the coastal marine area and, like the Mataikona seawall reviewed earlier, required a discretionary activity coastal permit.

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.

The officer report states at the beginning of the effects assessment that "Evaluation by the applicant has determined that there are no practical alternatives to the protection works that may be adopted at this location." (The reviewer did not receive a copy of the application or Assessment of Environmental Effects for this case study.)

The effects on the taiapure were considered and were the subject of consultation, but the fin fish on this high turbidity coast were considered unlikely to be affected.

The visual effects (in the middle distance from Te Kopi) and the effects on access (remote and dangerous) were assessed as minor.

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, including…*
> – Predicted future erosion…
> – Consideration of various alignment options…including inland routes
> – Cost estimates…
> – Remedial action now will avert major earthworks of the cliff face…
> – Angular quarry boulders [reduce the quantity of rock required]
> – Do-nothing option would result in the loss of road access…

Consent was granted under delegation, for the 10 year period suggested by the Department of Conservation in its submission.

Appendix 12

Analysis of the Wainui Beach consent process and Court judgments

This appendix supports section 3.4 of the main report. It contains a more detailed analysis of the consent process and Court judgments in relation to the coastal hazard related NZCPS policies.

Setting the scene

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 also is 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.

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

It also has one of the better data sets in New Zealand of beach profiles and dune profiles.

The intensely developed residential settlement occupies the southern half of the Wainui Beach frontage (2.1 km), while the Lysnar Domain public reserve occupies the northern half of the beach frontage (2.1 km).

The residential area became established about 1912 with a few beachfront cottages. In the 1920s and 1930s, subdivisions were established at the southern end of the beach. After World War II, subdivision spread up to Lysnar Domain.

From around 1950, the character of the settlement has changed from a holiday resort with baches to a residential suburb with substantial homes. Today, Wainui Beach has 235 sections, of which 106 are beachfront properties.

Also from around 1950, a series of increasingly substantial property protection works has been constructed to deal with the increasing erosion hazard (from the 1996 Officer report to Hearing Committee, Appendix A):

1942: concrete seawall to protect one property;
1955: willow branch fascines backed by stone-filled tar drums;
1960: railway iron and timber seawall;
1961: 28 steel sheet pile spur groynes built by Cook County Council, following a severe storm in 1955 leading to financial assistance from the Government in 1959;

1962: longitudinal railway irons thatched with manuka fascines;
1966: double row of driven railway irons with manuka fascines tied between;
1975: three of the steel sheet pile spur groynes replaced or strengthened with timber and concrete; gabion baskets placed;
1976: more longitudinal works and more gabion baskets;
1980: most steel sheet pile spur groynes removed as ineffective;
1981: more gabion baskets placed and damaged gabion baskets replaced;
1982: beginning of the Wainui Beach Foreshore Protection Scheme – longitudinal gabion and timber walls plus four spur groynes;
1983: rock placed behind log rail longitudinal protection, plus drive new rails and repairs after storm damage;
1992: May – gabion repair and strengthening after damage from heavy wave attack;
Council placed rock in gap where gabions destroyed;
June – extensive rock placed by Council
July – more rock placed by residents.

(The increasing erosion hazard and need for protection works also led to planning initiatives during this period, including Council resolutions in 1976 to control development, and the commissioning in 1980 of a coastal hazard zone assessment by Dr Jeremy Gibb.)

A series of winter storms from May to November in 1992 led to severely lowered beach levels and heavy attack on 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.

The consent process

The beginning of the consent process – 1992

At the end of July 1992, further unauthorised dumping of rock by residents was halted by the Council and residents were advised that a coastal permit was required.

Nevertheless, more rock was placed by residents during August 1992.

On 20 August 1992, the Council determined that a restricted coastal activity coastal permit was required because the length of the total works would exceed 200 lineal metres.

Applications for a restricted coastal activity – 1993

Two applications for construction of permanent protection works (incorporating the unauthorised works) were eventually received from the residents and a hearing was set for December 1993.

The hearing commenced but was aborted after the applicants challenged the status of the activity on the basis that the works:

- fell outside the coastal marine area and were therefore not a restricted coastal activity; and
- were, in any case, emergency works under section 330 of the Resource Management Act.

Planning Tribunal Declaration – 1994

Declarations were sought from the Planning Tribunal, which duly held a hearing in August 1994 (ie after the gazettal of the NZCPS).

In response to a number of matters put before the Planning Tribunal by the residents in addition to the above, the Tribunal found in *Falkner v Gisborne District Council A82/94*:

- The works went beyond maintenance, did not qualify as an existing use, and needed a resource consent.
- The works were not an emergency work, particularly as the erosion was reasonably foreseeable.
- The works were outside the coastal marine area and hence were not a restricted coastal activity.
- While the use of land for protection works was a permitted activity, the construction of the works did require a land use consent.

The approach taken by the Planning Tribunal to the difficult issue of the MHWS jurisdictional boundary was to look for a pragmatic and readily ascertainable boundary. The Tribunal chose the front face of the existing seawalls.

Uncertainty in the District Plan provisions raised the prospect that a determination that the works were on the seaward side of the MHWS line would result in a rigorous restricted coastal activity consent process, while a determination that they were on the landward side of MHWS, would be the difference between a permitted activity with no consent process at all.

High Court Appeal – 1995

The residents appealed aspects of the Planning Tribunal declaration, and the appeal was heard by the High Court in May 1995 (*Falkner v Gisborne District Council on appeal [1995] 3 NZLR 622*).

The essence of the residents' 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 the people have a common law right to protect their properties.

There was also the issue of whether restrictions on the protection of private property amounted to seizure of private land without due compensation.

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

> *Clearly, a unilateral right to protect one's property from the sea is inconsistent with the resource consent procedure envisaged by the Act; accordingly, any protection work proposed by the residents must be subject to that procedure.*

His Honour went on to note:

> *This appeal is of course not concerned with the validity of the proposed policy of 'managed retreat'. Suffice to say that the governing philosophy of sustainability does not of itself require the protection of individuals' property to be weighed more heavily than the protection of the environment and the public interest generally.*

And by way of conclusion:

> *Any common law duty on the Crown or the Council to protect the coastline is not an absolute duty in the sense alleged by the appellants. It is also questionable whether the common law today would recognise the right of property owners to protect their land to the extent that the appellants require, given that it is no longer taken for granted that the natural process of erosion is necessarily an evil or mischief to be avoided wherever possible.*

However, Justice Barker did comment on the lack of any compensation provisions in the Resource Management Act, and expressed concern for the beachfront property owners:

> *There is a grim connotation for beach front owners who perceive not only that they are lacking local government support, but are exposed on that account to the greater likelihood of damage to their properties from coastal hazards.*
>
> *I expressed concern at the hearing that a seemingly insensitive application of a 'managed retreat' policy, as advocated by the respondents' officials, ignored the fact that discontinuance of protection works would seriously affect the liability in the long term and the marketability in the short term of the appellants' properties. Many have invested their life savings in a Wainui Beach property.*

Justice Barker did also state:

... it appears that the futility of continuing the protective works, and their essentially temporary nature, was signalled by the authorities, even 20 years ago.

The first land use application – 1995

The High Court decision led to the residents preparing an application for existing and additional protection works that involved the entire beachfront along the residential area. The application received by the Council in August 1995 was not deemed by the Council to be sufficiently clear or to have sufficient information to enable it to proceed. Following a request for further information, the application was eventually abandoned.

The second land use application – 1996

This application by the Wainui Beach Property Protection Committee led to a substantive hearing of a proposal for a rock revetment seawall, and a decision on the proposed works by Commissioners independent of the Council.

The Gisborne District Council officer report – July 1996

The officer report by Ross Muir to the Special Hearings Committee is a comprehensive document.

The Officer report cites nine of the 14 General Principles of the NZCPS as applicable to the application.

All of the coastal hazard related NZCPS policies identified in this review are quoted in full, along with an interpretation of their application to the proposed works and their effects. Other policies are also cited in relation to the potential effects of the protection works on values such as those important to tangata whenua.

The Gisborne Regional Policy Statement is considered. That policy statement was adopted and effectively operative in relation to provisions relevant to this application.

The officer report states that "on matters impinging on the coastal environment, the guidelines developed in the NZCPS have been adopted" by the regional policy statement.

It states that:

> *Submissions received in the course of developing the Regional Policy Statement indicate a high level of interest in the management of the coastal resource. Importance was placed on maintaining existing recreational, scenic and cultural values. Some refer to it as the Region's greatest asset. The importance of the coast to the regional tourist industry was stressed also.*

The officer report quotes from discussion in the Regional Policy Statement as follows:

> *… coastal protection works designed in the 1960's may now no longer be appropriate and may be accentuating the very problem they were designed to control.*

An objective of the Regional Policy Statement is integrated management of the coastal resource, and an associated policy is:

> *To recognise and maintain in as natural a condition as possible, the dynamic, complex and interdependent nature of natural and physical resources in the coastal environment"*

In relation to natural hazards, the officer report refers again, by way of introduction to the policies in the Regional Policy Statement, to the NZCPS policies on natural hazards and the commentary prepared by the Board of Inquiry members.

Of particular pertinence is Regional Policy Statement Policy 2.3.2 which, apart from reiterating the NZCPS policies on natural hazard, goes beyond those policies to state this policy goal:

1. *To encourage and facilitate changes, over time, to patterns of human settlement, development and activities which are not affected by natural hazards and which do not induce or worsen impacts of natural processes, and which recognise and allow for some natural features to migrate inland as a result of dynamic coastal processes.*

Regional Policy Statement Policy 2.3.2 then goes on to particularise NZCPS Policy 3.4.6 with a list of conditions/situations that must *all* be met for protection works to be appropriate [or to be the best practicable option for the future]:

a) *needed to protect existing development, or waahi tapu or new public infrastructure such as ports, roads, bridges; and*

b) *have a favourable benefit to cost ratio; and*

c) *will not have significant adverse effects on the natural character of the coastal environment, or other adverse environmental effects; and*

d) *will not cause or worsen hazards to other lands/waters; and*

e) *can be designed with confidence of long term effective performance; and*

f) *are the only practicable alternative.*

The Regional Policy Statement provides the following explanation:

> *Protection works against natural hazards should not be a routine response but should be confined to the situations listed.*
>
> *The costs and environmental effects of protection works such as loss of natural character, modification or destruction of habitat, and the past ineffectiveness of such works means a new and more targeted attitude is required.*

The officer report also refers back to the Resource Management Act section 32 analysis that considered the alternatives to Policy 2.3.2, expressed as polarised positions:

1. No protection *where restoration of natural values would be at considerable public and private cost.*

2. *A strong commitment to protection works at the expense of the environment.*

The officer report considered that the Regional Policy Statement struck a middle ground, but only where the impacts of the works were "economically and environmentally sustainable".

The officer report goes on to consider the Transitional Gisborne District Plan, but this dates from 1989 and is of no relevance to the review of the NZCPS, so is not discussed further here.

The officer report discusses the 1981 and 1995 coastal hazard zone assessments by Dr Jeremy Gibb, noting that the 1995 hazard lines are, under all the scenarios considered, further landward than the 1981 hazard line.

Interestingly, the officer report then reports the results of an investigation:

> *... to ascertain the extent to which the residents might reasonably have been aware of the erosion risk which exists at the beach at either*
>
> *a) the time they decided to commit further to the capital development of their property; or*
>
> *b) the time they decided to purchase a property subsequent to the notification of the Erosion Hazard Area in the Cook County Plan in 1982.*

The results of this investigation into how many residents should reasonably have been aware of the risk they were taking before investing in hazard prone property were:

- Around 75% of the current owners purchased their properties after notification of the restrictive Hazard Area in the District Plan

- Around 50 % of the properties are encumbered in some form that warns of and indemnifies Council against damage to buildings from coastal erosion.

Another pertinent issue is addressed in the officer report. The proposed seawalls would be substantial works on Council public reserves vested under the Reserves Act, and would require Building Act consents. The Council concerns can be summarised as follows:

- Because a Building Act consent can only be granted to the owner of the land, and Council is the 'owner' of the reserve, the Council will become responsible for the works. It is not comfortable with such responsibility, particularly where the works create the perception of protection and safety and the Council is not confident that the works will achieve any real long-term protection from coastal hazards. Liability issues arise.

- The purpose of an esplanade reserve is to maintain or enhance the natural functioning of the adjacent sea, protect the natural values associated with the esplanade reserve, mitigate natural hazards, and enable public recreational use. Is the requirement to manage the reserve to protect its values in their natural state for the public, compatible with protection works that will protect private property at the cost of degrading those natural and recreational values?

The officer report does not attempt to resolve these matters, but notes that:

> *It is difficult to imagine how the construction of a coherent [seawall protection scheme] can be achieved if access to a significant part of the foredune/foreshore is denied the residents.*

The officer report summarises the nine submissions received. The majority were from residents in support of the proposed works, with reasons given including that:

- the works are cost effective and essential to the protection of the residents' property;
- the works would stop the loss of land to the sea;
- improvements to the works have occurred over time and can be expected in the future;
- sand replenishment is not dependent on the foreshore;
- the works would not detract from the natural character of the beach; and
- the works would stabilise the foredune to allow other protective measures such as planting.

Some submissions considered that the Council had a duty to the residents to maintain property values by promoting, or at least approving, the works.

The opposing submissions from the Department of Conservation and one resident are summarised in the officer report as:

- Wainui Beach has regional and national significance
- the works are not a long-term solution to the erosion problem
- the works will have adverse effects on the natural character of the beach

- the works will have adverse effects on other parts of the beach
- it would be desirable for development to retreat from the foredune
- the works are contrary to the RMA and statutory planning documents.

One other issue dealt with in the detailed expert evidence prepared, and addressed later in the officer report, is kaitiakitanga.

In consultation with the Council and Department of Conservation, the tangata whenua, Ngati Oneone, set out evidence that:

- traces the arrival of ancestors and development of hapu boundaries;
- asserts their kaitiakitanga of the Wainui Beach;
- demonstrates a depth of understanding of the natural coastal processes and recognition of a slow but perceptible coastal retreat, as a result of long and intimate association with the beach environment;
- expresses a willingness to move human bones from urupa to accommodate coastal erosion;
- considers that the coastal hazard problems that confront the East Coast today are the result of poor decisions;
- recognises and sympathises with the great distress being caused to beachfront residents, but states that the preferred course of Ngati Oneone is to allow the sea to naturally come and go, so that in the long term a more stable hinterland will be available and the beach preserved;
- asserts that Ngati Oneone do not wish to see any further works carried out that will put at risk the future of the beach for visitors and locals alike; and
- asserts that Wainui Beach is a taonga and an area which exemplified the values of their culture and tradition.

The evidence of Mrs Searancke is included at the end of this Appendix as an important statement of kaitiakitanga in the context of responding to coastal erosion at a beach with significant values.

In Part Three: Discussion, the officer report assesses the position of the applicants, namely that (in summary) the applicants, with the support of reports and evidence:

- challenge 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.

Underlying the officer report response is the Council's acceptance of the validity of Dr Gibb's conclusions that Wainui Beach is experiencing a slow long-term trend of erosion. From this flows the assessment in Section 6.1 of the officer report that passive erosion will lead to long-term degradation or loss of the beach and increased attack on the protection works.

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.

In Section 6.5.3: Other Options, and Section 6.6 Policy Statements and Plans, there is discussion of particular interest to the application of NZCPS Policy 3.4.6. A socio-economic assessment of the effects of the proposed works was commissioned in 1992 from Kingett Mitchell & Associates, which identified and valued three options for the future of Wainui Beach. The study took into account wider cost/benefit issues spread over a 50-year period for:

- the retreat option;
- the proposed protection works option; and
- the permanent protection option.

The socio-economic study conclusion was that retreat was the preferred option, followed by the proposed protection works option.

The officer report states that, similarly, in 1996 Mr Peacock estimated the costs of the retreat option and concluded that, for the northern end of the residential area, the cost of retreat compared favourably with the cost of protection works designed to withstand a moderate storm.

In relation to the proposed protection works, Mr Peacock, upon whose engineering design the applicants based their 'low cost' design, is reported as stating simply that:

> *In a moderate event with low beach levels, the proposed revetment will fail.*

In response to the applicants' assertion that the protection works are sanctioned by the NZCPS but the retreat option is not, the officer report states:

> *It is believed that the best practicable option approach in the NZCPS cannot be used to justify the majority of the works because:*
> - *the nature of the coastal processes and the design weakness of the works will make further works in the future a necessity*
> - *the works will create adverse effects on the coastal environment*
> - *the retreat option is an alternative that is realistic in the longer term and must be seriously considered in the context of this application.*

Section 7.0: Conclusion is compelling reading for a consideration of how NZCPS policies, and particularly Policy 3.4.6, have been interpreted and applied to this particular situation. It is included at the end of this Appendix.

In summary, the officer report is clearly mindful of the High Court reference to "a seemingly insensitive application of a 'managed retreat' policy" in coming to, and carefully justifying, a conclusion that the proposed protection works:

- do not promote the purpose of the RMA;
- 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, ie they will not perform the job expected of them by the residents.

The decision of independent Commissioners – April 1998

The decision of the Commissioners begins by traversing much the same ground as covered in the officer report.

In the discussion of the background to the application, the Commissioners record that their attention was particularly drawn to the involvement of the Gisborne District Council and other agencies in the construction and maintenance of protection works up to 1992, and even the administration of a rating scheme to fund continued protection works.

It was also noted by the Commissioners (as by the High Court) that "unlike many other countries, New Zealand has no comprehensive statutory national system for funding coastal protection works or for providing compensation for losses by property owners where protection works are not provided or permitted."

In their examination of the position of the different parties (as already reviewed), the Commissioners focus on a general consensus that protection works at the southern end of the beachfront residential area could in principle be acceptable because of a lesser effect on the beach as a whole, and because there is not the opportunity to retreat within the property.

The evidence of Mrs Searancke of Ngati Oneone was considered to be of significance. The Commissioners note the preference of tangata whenua to let the sea come and go naturally so as to preserve the beach, and also their impression that the local iwi had warned of the dangers of permanently establishing civilisation in this coastal environment.

Evidence as to the landscape and natural character effects of the hard engineering structures on the beach is briefly covered, with the Commissioners expressing a view contrary to the Department of Conservation's landscape expert witness, namely 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 natural character of the beach.*

Evidence from Mr Stewart, a local resident, surfer, and national surf judge is reported. His position was that seawalls do have effects on beaches, and at Wainui those effects have been adverse to beach users. He referred to the risks to surfers from old and damaged protection works [notably jagged remnant steel sheet piles exposed by ongoing downcutting of the silt underlying the beach].

In its consideration of the NZCPS, particular attention was paid to NZCPS Policy 3.4.6, and the decision states:

> *It is not clear to the Commissioners that coastal protection works at Wainui Beach generally are the best practical option in the longer term. Certainly the design of the coastal protection works proposed by the applicant may not avoid adverse environmental effects to the extent practicable.*
>
> *However, it is not possible to say that coastal protection works in general are prohibited as an option on Wainui Beach by the New Zealand Coastal Policy Statement.*

In their findings, 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.

Residents' appeal against resource consent refusal – June 1998

The residents appealed the refusal of their application by the independent Commissioners, *RMA 535/98*.

The appeal was sent to mediation, and the residents, the Council and the Department of Conservation began discussions.

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

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

Consent Order for appeal against resource consent refusal – April 2002

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".

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

An application was made by Gisborne District Council and the Department of Conservation to strike out the residents' reference "unless further and better particulars" of their objections to the Regional Coastal Environment Plan were provided in a reasonable time.

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.

Judge Whiting timetabled the hearing to address both the reference and the consent conditions for early 2004.

In particulars filed by the residents on 31 July 2003, a bias against people and communities was alleged, in that people and communities are not considered part of natural character.

Wainui Beach Draft Management Strategy – 2002–2004

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

A July 2000 resolution by Gisborne District Council to reactivate the special rating area for foredune protection at Wainui Beach led to 'Wainui Beach Open Days' in 2001. Participation at the open days led to the formation of a Wainui Beach Management Strategy Committee and, with help from a community advocacy grant via the Department of Conservation, the Draft Strategy was prepared.

The Draft Strategy records that, in this fastest growing residential area in the Gisborne/Tarawhaiti region:

> *Over the past three years, the bare land value of beach front property at Wainui Beach has more than doubled.*

The Draft Strategy also records that:

> *Wainui Beach is a world renowned surf beach that plays a major part in the development of New Zealand's best surfers. Its natural beauty and easy accessibility see it utilised by ever increasing numbers pursuing a variety of recreational interests. These amenity values of Wainui Beach are increasingly important factors in Gisborne's tourism potential.*

The Draft Strategy Vision Statement is:

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

The relationship with other Gisborne District Council documents is discussed, and the involvement of Ngati Oneone in preparing the Draft Strategy is noted. Both Mr Tupara and Mrs Searancke were on the strategy committee.

With the comment that the beach has been considered holistically but that there are different 'compartments', each with different characteristics which require different protection strategies, the Draft Strategy launches into, for each compartment:

- the current situation;
- detailed Preferred Beach Management Options; and
- apportionment of costs.

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.

The preferred Beach Management Options include: retiring and replanting native species on the headland south of the beach at Tuahine Headland; a seawall just south of the beach to protect against cliff toe erosion and landslip; a new seawall at the southern end of the beach; and soft engineering options and removal of existing works and retreat of dwellings within their properties now and over time.

Of note are the comments of the strategy committee in relation to the section of beach north of the recommended new rock revetments and Wainui Stream:

> *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. They are able to be relocated back within their own properties at an estimated total cost for the three dwellings of $176,000 plus GST.

It is noted in the Draft Strategy that two neighbouring properties in Pare Street have already relocated their dwellings at the owners' own initiative. One of those dwellings now has a setback of 40 metres which, at a general rate of beach retreat of 0.2–0.5 metres per year, is estimated by Dr Gibb to give a 100-year protection from coastal erosion hazard.

BEFORE THE HEARING COMMITTEE

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MA'ITER of an application for a Landuse Resource Consent Pursuant to Section 88 of the Act

STATEMENT OF EVIDENCE OF INGRID SEARANCKE

1. Background

My name is Ingrid Searancke. Through my great grandfather, Pera Te Wera. (Rangi), I am of Ngati Oneone descent. Several of my family still live and own property at Wainui Beach. This land has been handed down to us through our tipuna.

Until the arrival of the Pakeha, our land was held by the elder or leader of each generation for common use by whanau and hapu. Our grandparents were our historical tutors. They were all also tribal cousins and many of their histories overlap.

Through the teachings of my paternal grandfather I can take a memory walk from his tribal area, Nuhiti, Anaura, right down the coast to his wife's tribal area of Wainui Beach. As a young man he knew all the walking tracks up and down the coastline most of them being around the coast near to the beach.

When he married our grandmother, he made his home at Wainui Beach but still maintained a close interest in his own lands.

2. Observations

Both the grandparents, although well educated, adhered quite strongly to Maori values. My grandfather lived at Wainui Beach for over 65 years, and during that time saw many changes. He would tell us of his almost daily visits to (be beach, if not when the tide was out, along the beach then across the land to Tuahine Point.

Tuahine Point at that time reached out into the sea with the lighthouse centred almost halfway. We, as children on our visits there with him, were intrigued with the seven little hillocks which protruded out from Maungaroa into the sea, and we called them 'The Seven Sisters". When the tides allowed, he and my grandmother would go out to the furtherest point to gather seafood. This last point was titlelised to her and it became their particular haven.

Forty years after her death as a beneficiary in her estate, I received in the mail a Harbour Board rate demand for that particular piece of land. This piece of land was, in fact, no linger there, and in fact, of "The Seven sisters", only three remained at that time. Today none remains.

Even before the beach protection works were started, I noticed from the late 1940's and 50's how waters even at low tide seemed deeper in the channels, how more rocks seemed to be taking up the sand towards Tuahine, and gradually the lawns and dunes in front of the houses between the old cemetery, Wainui Street and along the Pare Street front to Mrs Pyke's concrete wall, were lessening. Instead of gradual slopes down to the beach, some of the banks had slipped away and residents were having to build steps to get down to the beach.

During this period, a Mr George Cook who had come to New Zealand with his parents and brothers and married one of our aunts, was farming part of the property at Wainui, actually grazing dairy cows and sheep on Tuahine Point and Maungaroa Hill. Daily he would go out to this area to check his stock and always come back talking about the erosion that was occurring.

Sometimes we would go with him and were quite appalled at the huge slips of land falling away into the sea.

There are a number of other examples concerning the changes at the southern end of Wainui Beach which come to mind.

I recall the house owned by Joyce Tomb. She had a large lawn in front of her house in Pare Street which has now disappeared. This in fact has occurred to a large number of properties at the southern end of Wainui Beach. As the beach has steadily retreated, lawns have been eroded away and an embankment created and steps are now required down that embankment onto the beach, whereas previously people could walk off their lawns down onto the beach without difficulty.

Behind the house currently occupied by Mr Weatherhead, there was a huge sand slide which extended right down to the beach. That slide has totally disappeared and now only a cliff remains. There was a swimming hole in front of Tuahene Crescent in which we used to teach the kids to swim. That has now been gone for many years. On Mr Falkners property I recall there were a number of macrocarpa trees in front of his house and these have also gone. When I was a child we would follow a walkway past the cemetery and Falkner's house and go round by the Point where a piece of rock once stood up. This has now been entirely eroded away and only a platform remains.

The Sponge Bay cove was also changing so rapidly through erosion that by the 1960's one of the loveliest coves in the area was lost forever. There have been other changes occurring around this same coast. At Nuhiti there was a small island on which we had a family reserve. Up until 30 years ago you could land boats there. Now, the beach has disappeared and only a very deep channel remains. At Anaura Bay the same process has occurred. There were once trees and a significant area of land on which now only the woodshed remains sticking out towards the sea, At Whangara there has also been an ongoing process of erosion and 1 have observed that it is the southern end of Whangara that is subject to the erosion as well.

I can best summarize my observations of what has occurred, particularly at the southern end of Wainui Beach in my lifetime, as a slow and steady and perceptible coastal retreat.

3. Amenities

For centuries before and after the arrival of Captain Cook, the beach areas, rocks and waters from the Turanganui River, Kaiti beach Sponge Bay, Tuamotu Island, to Tuaheni Point at Wainui Beach were used

regularly for gathering seafood for the Ngati Oneone people. At times they would go to beaches at Makarori, Turihau and Pouawa.

The main population of Ngati Oneone lived in the Kaiti and Wainui areas, as these beaches were more readily accessible for food gathering purposes.

Up until the 1950's there was still an abundance of kina, paua, pupu, crayfish and snapper to be had to Tuaheni Point and the Ngati Oneone and other Maori who had come to live in the Gisborne City District were able to augment their diets from the natural resources available in the area.

However, in recent times these resources have become scarce. In fact, there are no longer any nursery beds of small paua to be found there.

Many of the Ngati Oneone people in Kaiti would spend the week and holidays coming to Wainui Beach for the whole day - sometimes to visit their urupa, and if the tide was suitable, to get some kaimoana. The children would have a picnic, play games on the beach, and watch over the swimming in some of the water pools left at low tide. There would be a wide expanse of sand during low tide from Okitu right through to Tuahine Point. and during the l930's and 40's cars would be driven right round to Shark Bay. Today, at the southern end of Wainui Beach, the wide expanse of sand has gone and the houses sit immediately above protection works. This now has the feel of private property and it is not an area which is any longer available or accessible for these activities.

4. Urupa

The Ngati Oneone urupa is today in two parts. The old part is on the seaward side of Murphy Road. and the new part (which is in use), is on the opposite side of the road. In ancient times this urupa extended from the settlement pa at Tuahine Point to the Wainui Stream. Prior to that area being purchased for housing from some of the whanau, many old bones would be uncovered by shifting sands, and if we discovered one of these we would go to our grandfather and he would return with us to reinter these bones in the modern cemetery - which is now the old part. In recent times there have been incidents of this kind there Council engineers and workers, while tidying up the grass verges on the roadside, have uncovered bones, and again we have had to reinter these in the cemetery.

Ngati Oneone accept that there's every likelihood that the sea could encroach in as far as the old cemetery. If it does so, we will do what has been done before. We will take up the bones and reinter them on the safer side. We would not expect Council and anyone else to try to save the urupa. lf the sea wishes to encroach that far, so be it.

During the 1800's erosion was also occurring on this coast. The caves which were on the cliffs and Tuahine Point, round to Sponge Bay, bad been used for burials. When erosion threatened those caves, those buried within them were uplifted and taken inland onto Mangaroa and reinterred in other caves which have since been covered in. There are many sand type caves up in the hills from Wainui Beach, Sponge Bay, and Titirangi, most of which were used in this way.

Conclusion

The problems that confront us today on the East Coast have been brought about by a host of poor decisions. Some natural hazards have occurred but many have been caused by man.

It is the view of Ngati Oneone that at Wainui Beach the preferred course is to allow the sea to naturally come and go so that in the long-term a more stable hinterland will be available and the beach preserved.

The Ngati Oneone people of Wainui realise that what is happening to the residents along the Wainui foreshore is causing them all great distress. We sympathise with that distress.

However, had the warnings of our people in bygone days been heeded concerning the manner in which the environment should be managed, it is our view that this may not have occurred.

The Ngati Oneone people do not wish to see any further works carried out at Wainui Beach which will put at risk the future of the beach for the benefit of I visitors and locals alike.

This view has been carefully considered and reflects the importance of Wainui Beach to the Ngati Oneone people. To us, Wainui Beach is a taonga and an area which exemplified the values of our culture and tradition.

GISBORNE DISTRICT COUNCIL
EP.4222
GDC 96/435 Ref: PD 96028

26 July 1996

THE CHIEF EXECUTIVE

COMMITTEE: SPECIAL HEARINGS COMMITTEE

SUBJECT: OFFICER'S REPORT ON AN APPLICATION FOR RESOURCE CONSENT: (LAND USE- DISCRETIONARY ACTIVITY) TO CONSTRUCT FOREDUNE PROTECTION WORKS; WAINUI BEACH, GISBORNE

APPLICANTS: WAINUI PROPERTY PROTECTION COMMITTEE

For hearing commencing on 31 July 1996,
Gisborne District Council
ADMINISTRATIVE CENTRE, FITZHERBERT STREET

Discussed also are the provisions of the New Zealand Coastal Policy Statement and the Regional Policy Statement. These documents are of considerable importance and will be used extensively in the resource consent process. The application attempts to draw a distinction in the operation of the Act as it relates to resource consent applications and the plan formulation process. Many of the matters to be covered in the assessment of environment effects have been omitted on the basis that they are more properly dealt with as part of the latter process.

This cannot be the case. The Act requires a thorough assessment of all matters relevant to the proposal whether or not these are enshrined in plans or otherwise. The application also considers that the proposal is sanctioned by the provisions of the Act and the NZCPS and that the option of retreat is not. A thorough reading of the provisions of these documents cannot support this view. It is true that different standards may be applied to the protection of existing coastal development but there is no presumption in favour of the works. It is believed that the best practicable option in the NZCPS cannot be used to justify the majority of the works because:

> The nature of the coastal process and the design weaknesses of the works will make further works in the future a necessity
> The works will create adverse effects on the coastal environment
> The retreat option is an alternative that is realistic in the longer term and must be seriously considered in the context of this application.

Furthermore, the Regional Policy Statement provides clear objectives and policies which support the NZCPS policies

7.0 CONCLUSION

This report has examined the application for landuse consents relating to foreshore protection works at Wainui Beach. The natural and physical resources have been assessed and a commentary is made on the coastal processes that operate. Past efforts at defending the beach against storm attack have been examined. The previous disclaimers by the Soil Conservation & Rivers Control Council have been noted. The High Court noted in this regard: "It appears that the futility of continuing the protective works, and their essentially temporary nature was signaled by the authorities, even twenty years ago ".

The matters to be considered under the Resource Management Act 1991 and the associated Statements and Plans have been addressed. Reference has been made to relevant technical reports.

The above assessment has lead to the conclusion that applications do not promote the purpose of the Act, do not accord with the objectives policies and rules of the various statutory plans and therefore do not represent a sustainable use of natural and physical resources. It appears also that the works are not sustainable in a physical sense, that is, they will not perform the job expected of them by the residents.

In reaching this conclusion the position that the property owners find themselves in cannot be ignored. Perhaps it could be argued that allowing the protection works is necessary to provide for the resident's economic and social well being as provided for in section 5. However the body of case law which has focused on the relationship of the enabling part of section 5 and the three environmental imperatives that follow do not allow the parts of this section to be considered separately from each other. Furthermore it may be considered that to prevent the continuance of some form of protection without an overall strategy to implement a process of orderly retreat of development can not be reasonably contemplated under the Act. Justice Barker noted:

> *"that a seemingly insensitive application of a "managed retreat" policy ...ignored the fact that the discontinuance of protection works would seriously affect the viability in the long term and the marketability in the short term of the residents properties. Many of the residents have invested their life savings in a Wainui Beach property"*

The observation relating to marketability highlights one of the issues central to this discussion. Although the properties are included within an acknowledged hazard area, the land values are exceptionally high. The period of relatively low erosion rates prior to 1992 coupled with an unrealistic (and unfounded) expectation of the effectiveness of the existing Protection Scheme, may partly explain this. The socio-economic report

commissioned by the Council noted that land values of beach front properties are substantially higher than comparable properties in Gisborne City. To perpetuate unrealistic expectations about the ability of the proposals to provide the degree of protection expected of them by the residents will do nothing to avoid the current argument recurring in the future. In the meantime substantial capital investment continues, creates further demands to provide additional defensive works, which in turn degrade the coastal resource further.

There appears to be no direction in the Act which provides for any special weighting to be given to the existing investment in land or buildings, or the existing commitment of human resources in an existing activity. The rate at which the Act is implemented through the provisions of plans is generally left to each community to decide. However, the Act is non-negotiable in certain areas and policy directives contained in the NZCPS and the RPS leave little room for doubt in this regard.

To what extent the capital development of the foreshore must be sustained under the Act must be determined. The inclusion of references to people and communities and amenity values is significant. The Minister for the Environment states that the inclusion of people in Section 5 of the Act was not to introduce a balance or trading-off of the sustainable management of natural and physical resources. Conversely, Randerson (1991) argues that legitimate economic aspirations of individuals are a relevant consideration and that practicality and cost are issues which will need to be addressed under the Act:

> *"...in such situations, the exercise of discretion is likely to require consideration of the extent and nature of the adverse effects and the practicality, cost and efficacy of the steps which would be necessary to avoid adverse effects. Correspondingly greater efforts to avoid adverse affects will be required as their seriousness increases. Depending on the circumstances to avoid or mitigate adverse affects to a sufficient degree may warrant refusal of resource consent".*

To discontinue any form of protective works will cause considerable distress to those residents affected. It must be acknowledged however, that many would have bought or developed property in the knowledge of the potential hazard that exists. Many Certificates of Title are endorsed either with indemnity notices or caveats and the District Plan has clearly acknowledged the hazard since 1983. The residential development of foredunes does bring with it a certain risk. It is natural that owners will want to pursue means of reducing that risk, however if that is at the expense of the very resource the residents or the wider community seek to use and enjoy that cannot be considered to be managing natural or physical resources in a sustainable my. way. Again to quote Justice Barker:

> *The governing philosophy of sustainability does not of itself require the protection of individuals ' property to be weighed more heavily than the protection of the environment and the public interest generally.*

The overall conclusion is that the protection works proposed in the application are unsustainable and would have an adverse effect of the environment which could not be remedied or mitigated by the impositions of conditions of resource consent. These adverse effects are not balance by any positive effects because the works are seriously under-designed and will not provide the degree of protection anticipated by the residents.

Peacock (1996) draws a distinction with regard to the foreshore protection works south of the Wainui Stream. For the various reasons he has stated, there may be some scope for the reconsideration of a proposal provided that the design of the works is upgraded to, and maintained at, a suitable standard.

There will be other issues to address also notably; public access, natural character, and Tangata Whenua values. These matters collectively require consideration beyond the scope of the current application and therefore could be pursued only through tile submission of a new application for resource consent.

This conclusion of this report has not been reached without consideration of the residents position. It could be argued that some latitude be given to allow the residents time to consider their options for the future. Much has been said about the "managed retreat policy". The Gisborne District Council has no such policy, although it is obvious that the time has come for serious consideration to be given to the matter. Whether the formulation of a retreat strategy is prepared under the auspices of the Council or another other body, it is important that the process is commenced now so that the issues may be addressed in an orderly manner, rather than the circumstances which prevailed in 1992.

However, it is recommended that option of issuing consent of limited duration not be pursued for the following reasons:

1. The existence of the works for even a short period of time could accentuate the coastal erosion process for the reasons described previously

2. It would be difficult to enforce the removal of the works at the expiration of consent. In the intervening time there might have been little or no erosion. The temptation to re-new the consent further would be strong, thus prolonging the issue and exposing a new generation of property owners to the problem. Conversely, erosion might with the consequences of the removal of the works having a severe and immediate impact on the resident's properties. Similarly the pressure to renew the consents would be considerable

3. It is questionable whether the expenditure involved in implementing the proposals for a short period of time would represent an efficient use of resources and would address the issues that need to be addressed now.

Appendix 13:

Analysis of Draft Plan and Strategy Initiatives in Wairarapa, Whakatane, Kapiti and Tauranga

This appendix supports Section 4 of the main report. It contains a more detailed analysis of the consistency of these four non- statutory documents with the coastal hazard related NZCPS policies. See Tables 4.1–4.5.

Draft Wairarapa Coastal Strategy

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

As stated by Greater Wellington Regional Council staff, the strategy 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".

In general, parts of the strategy (with the exception of the Natural Hazard section) tends to address natural hazards rather than the effects of coastal hazards and coastal hazard responses specifically.

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.

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.

Two policies in the draft strategy specific to natural hazards if not coastal hazards are:

- A precautionary approach is to be adopted where there is insufficient hazard information.
- To protect natural character, the policy is to avoid or minimise the need for hard engineering solutions that modify natural processes and ecosystems.

In the chapter devoted to hazards, a risk-based approach is taken, using the conventional (risk = likelihood x consequences) recommended in the NIWA "Coastal Hazards and Climate Change Guidance Note".

The issues raised in the draft strategy include a criticism of the lack of national and regional guidance in translating hazard policies into working documents that can effectively reduce the level of risk from natural hazards.

However, a notable absence from the Issues and Goals section is any recognition of the adverse environmental effects of responses to coastal hazards. This lack carries into the policies where there is a clear focus on avoiding increased risk, but no specific reference to avoiding environmental effects from hazard protection works. There is a policy of using protection works as a last resort, and of investigating environmental costs of applying hazard mitigation and risk management measures, but not specific explanation as to the environmental effects being avoided.

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.

(Note: this mirrors the NZCPS coastal hazard policies themselves, in failing to state explicitly why hazard protection works are to be avoided and used only as a last resort. It appears the criticism over lack of guidance is merited.)

The policies therefore are consistent with all of the Chapter 3.4 coastal hazard policies and the precautionary NZCPS Policy 3.3.1, but do not go further to identify the specific potential adverse effects or risks to the special qualities identified for the Wairarapa coast, as well as to the people and property.

One 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. This is a provision that is both strategic and specific to the Wairarapa coast, where land is probably both available and affordable.

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

The strategy does not identify specific rules that would 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,w depending on the type of hazard and the most appropriate response for that hazard. Design guidelines are provided to promote sensitive development by landowners and developers.

Management responses recommended in the report: *Whakatane District Council – Coastal Hazard Analysis*

The report *Whakatane District Council - Coastal Hazard Analysis*, November 2002 was prepared by Tonkin & Taylor Ltd.

It is important to recognise that Tonkin & Taylor was primarily undertaking a coastal hazard analysis, and the management responses are an indication of appropriate responses, rather than fully formed recommendations for District Plan provisions (as *is* the case with the Kapiti Coast Strategy recommendations).

The Coastal Erosion Hazard Assessment carried out divided the areas at risk into three zones:

- Current Erosion Risk Zone;
- 2060 Erosion Risk Zone; and
- 2100 Erosion Risk Zone.

These zones were determined by Tonkin & Taylor in a way that was designed to satisfy all the standards and criteria in the Bay of Plenty Regional Coastal Environment Plan, notably in Policy 11.2.3(f). This includes the impacts of sea level rise.

The coastal hazard analysis therefore readily gives effect to NZCPS Policy 3.4.1 and the taking account of sea level rise in that analysis is in accord with NZCPS Policy 3.4.2.

In the Management Methods section the point is made that as development of private property progresses and population increases, so also will user demand for recreational opportunities and facilities on the coast. Development pressure therefore brings a double whammy. The public recreation needs:

> *will tend to conflict with the natural functioning of the beach and dune system, the requirement to maintain and protect property and to maintain a high quality beach environment to suit the value of the properties.*

Therefore, management methods must take into account the various conflicts and develop a long-term approach to (slightly paraphrased):

- Reduce the risk of hazard events by decreasing their probability of occurrence.
- Reduce the risk of hazard events by limiting their potential effects.
- Increase the society's ability to cope with the effects of the events.

This addresses risk analysis not covered in the NZCPS.

Section 5.2.1: Planned Retreat

This section includes the usual controls 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.

However, the recommended planned retreat methods here would not achieve this except in a mass relocation when under imminent threat. No controls on increased density or value of development are specifically mentioned, other than in the Current Erosion Risk Zone.)

Method 1: Within the Current Erosion Risk Zone:

- No new council infrastructure (except boat ramps, outfalls etc)
- No new private development (no residential subdivision, no new dwellings).

This method gives effect in part to NZCPS Policy 3.2.2 (avoidance of effects), and NZCPS Policy 3.4.5.

Method 2: Within the future 2060 and 2100 Erosion Risk Zones:

- No major council infrastructure, unless required specifically within that zone.
- In existing residential settlements, all new private development to be readily and demonstrably relocatable, and above inundation levels.
- Outside existing residential settlements, no re-zoning to residential therefore no intensification of development?

This method is implicitly addressing NZCPS Policy 3.4.5 and anticipates or enables (but does not give full effect to) NZCPS Policy 3.4.6.

Method 3: include rules for existing development that take into account (but don't go much beyond) RMA section 10 existing use rights.

Section 5.2.2 Adaptation (Accommodation)

This includes a reference to a government backed insurance scheme in the United States of America whereby:

> *Communities participating in the National Flood Insurance Programme agree to enforce floodplain management regulations in identified hazard areas. In return, citizens in these communities are eligible to purchase flood insurance that is not normally available through private insurance companies.*

The recommended adaptation methods are:

- Guidelines for appropriate private re-development of existing dwellings;
- Notice of hazard on land title, LIM and PIM;
- Awareness raising of hazards; and
- Monitoring of erosion and inundation drivers.

Such adaptation methods are not covered in the regulation-focused NZCPS**.**

Section 5.2.3 Protection

This section sets out a method that includes hard protection works, but the recommendation is for:

- dune restoration (re-vegetation) with the assistance of community-based coast care groups; and
- control of access (across dunes).

Such protection methods are in accord with NZCPS Policy 3.4.3 and NZCPS Policy 3.4.6.

Section 5.3: Monitoring and evaluation

This section recommends monitoring of the coastline using new profiles at different points along the coast, including for climate change impacts. This is an extension of NZCPS Policy 3.4.1 in undertaking updating of coastal hazard areas.

Finally, evaluation of the performance of the implemented measures is recommended.

In advancing these recommended measures, Tonkin & Taylor made the following comment on the alternative of maintaining the status quo:

> *The status quo response is to maintain the existing system that includes ongoing piecemeal development of the coastal margin with each development assessed based on the results of a site specific assessment. This places an extensive cost burden on each individual developer, as well as providing potential for inconsistent assessments. The status quo option does not provide the best option either for sustainable coastal management or for treatment of coastal hazards.*

Draft strategy and recommended coastal hazard provisions for the Kapiti Coast District Plan

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.

Notably, the conventional ('risk = likelihood x consequence' formula adopted in the NIWA "Coastal Hazards and Climate Change Guidance Note" (August 2003)) is set aside for a ('risk = threat x vulnerability') approach that is not well defined. It is not clear how the final setback distances are arrived at.

In the early sections of the draft strategy, it is notable that the strategy promotes consistency in terminology, and appears to adopt the terminology developed by Environment Waikato for describing graduated setback zones. 'Primary development setback' and 'secondary development setback' nomenclature has the advantage of explicit allowance for matters other than coastal hazard to be taken into account in the determination of the appropriate width for zones which are to be subject to special planning controls. These graduated setback zones would make up the 'Coastal Hazard Management Area'.

Chapter 6: Hazard Management in the draft strategy sets out options carefully and comprehensively in a way fully in accord with the NZCPS Policies pertinent to coastal hazard management. A set of guiding principles to choose the response methods to be recommended for different sections of the Kapiti Coast with different hazards and circumstances is then set out:

Preventative principle:	*A preventative approach is best where the risks from coastal hazards are currently minimal but potentially significant, or not fully understood.*
Coordinative principle:	*A coordinated approach is more effective than individual approach.*
Participatory principle:	*Take into account the views and perspectives of all relevant stakeholders through collaborative involvement.*
Natural character principle:	*A protection of the natural character of the coast must be a pre-eminent concern.*
Public interest principle:	*Given the national importance of coastal resources, public interest should generally take precedence over private interests.*
Dynamic principle:	*The dynamic nature of coastal processes and their interrelationships, both physical (natural) and human, should be recognised.*
Best knowledge principle:	*Actions must be based on the best available knowledge at the time.*

This set of principles does not include a 'best practicable option approach for the future' principle in relation to protection works. It also does not include any principle involving a vision of 'risk reduction over time'.

A notable principle is the 'public interest principle' which would give precedence to the public interest over private interests in recognition of the national importance of coastal resources.

Chapter 8 of the draft strategy sets out the recommended strategic framework for long- term management of the Kapiti Coast followed by a summary of recommended actions for each individual Coastal Hazard Management Area.

Again the recommended strategic framework is generally closely aligned to the approach promoted by the NZCPS. Notably, however, hard protection works (being seawalls in Kapiti) are seen as a method of protecting public beaches.

The recommended actions appear to be essentially to continue the status quo, with:

- hazard zones of similar width but moved inland to reflect land lost since 1980 plus increased threat;
- protection works maintained and upgraded; and
- District Plan controls on development within the Hazard Management Area (rather than primary and secondary development setback areas?).

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

The recommended new Kapiti Coast District Plan coastal hazard provisions:

The proposed changes and/or new provisions are listed below (paraphrased for brevity), with comments on consistency with the NZCPS coastal hazard policies.

- The introduction/explanation section of the Coastal Hazards section would be replaced with a summary of the key findings from the strategy.
- The policy on creating esplanade reserves needs to include the role of reserves in protecting foredunes that provide a buffer to coastal erosion.

This is consistent with and a specific application of NZCPS Policies 3.4.2 and 3.4.3.

- A policy effectively repeating NZCPS Policy 3.4.3 re the buffering ability of dunes, etc.

Nothing more specific or beyond NZCPS Policy 3.4.3 is proposed.

- A coastal protection works policy that protection works that have significant adverse effects on [the full range of coastal values] should be discouraged, unless there is a high risk of significant damage to property or such protection works already exist.

This is not in accord with NZCPS Policy 3.4.6 which states that protection works should be permitted only where they are the best practicable option for the future. Rather, it focuses on the present threat to private property and whether seawalls presently exist. This policy also does not appear to be consistent with the public interest principle evinced earlier that "Given the national importance of coastal resources, public interest should generally take precedence over private interests", or with the natural character principle.

- Manage subdivision and development within the Primary Development Setback according to the latest information and knowledge.

This appears self evident. There is no reference to the precautionary approach provided by NZCPS Policy 3.3.1.

- Subdivision and building should be prohibited in the Primary Development Setback.

This is a specific application of NZCPS Policy 3.2.1.

- Structures for occupancy in the Secondary Development Setback should only be permitted if they meet appropriate conditions to satisfactorily mitigate the risks.

This does not meet the avoidance requirement of NZCPS Policy 3.2.2, nor does it provide specific policies to avoid increased risk for private owners, ratepayers or the environment. (The proposed rule changes would not achieve this either.)

- Promote community awareness about and initiatives for avoidance or mitigation of adverse effects from natural hazards.

This goes beyond the NZCPS Policies, which do not address community involvement in coastal hazard management planning. It addresses initiatives to deal with adverse effects, but not initiatives to avoid or reduce hazard risks.

- Encourage management options such as managed retreat, nourishment and planting in preference to hard engineering works, provided they are effective.

This also is not consistent with NZCPS Policy 3.4.6. On the one hand it is permissive (only 'encourage') while on the other hand it does not introduce a component of viability (retreat and nourishment *would* be effective, but possibly unaffordable, hence not the best practicable option).

- The effects of protection works on public access and visual values should be satisfactorily avoided or mitigated.

This is related to NZCPS Policy 3.2.2 without the dimension of first attempting avoidance. This policy follows on from the second policy on coastal protection works but appears in conflict with it. It is not consistent with NZCPS Policy 3.4.6 in that it does not address the broader dimensions of natural character or the difficulties of addressing public access and visual values on eroding coasts with ever larger seawalls, and provides no specific policies for achieving satisfactory avoidance or mitigation.

- Continued investigation into natural hazards, particularly where there is uncertainty or significant potential risk.

This policy is an extension of NZCPS Policy 3.4.1 that would see ongoing updating of hazards and risks.

Draft provisions for Tauranga District Plan

The draft coastal hazard management provisions proposed to resolve the references on the Tauranga District Plan represent a dramatic evolution of policies and methods in a District Plan, and the implementation of NZCPS policies at a district level.

As described by the District Planner, the 2002 draft provisions include policies which are specific and directive, and are perhaps more like rules in the way they are written. Combined with rules which include a number of prohibited and non-complying activities, the proposed provisions clearly signal (and prescribe) what development is appropriate in coastal hazard areas, rather than leaving that determination largely to the consent process. This is a significant change in approach, and appears to indicate that the Council:

- now considers it has sufficient information to have identified the extent and degree of coastal hazard in most of the district;
- has determined to a substantial degree which development is and is not appropriate in its particular district with its particular natural and built environment; and
- wishes to plan ahead and put in place strong provisions to better ensure that there will not be an increased net risk over time in the event that coastal hazards increase and coastal hazard zones move landward.

It is noted that Tauranga is perhaps unusual in having no existing protection works along its ocean coastline.

While the objective remains the same in both the existing and proposed provisions, the names of the graduated hazard zones have been changed in line with Environment Court directions, and new policies have been added in the 2002 provisions to:

- avoid financial and environmental costs on the community from inappropriate development;
- identify avoidance, relocation and/or managed retreat as the preferred response options for Tauranga district;
- impose conditions to ensure building relocation occurs if under immediate threat;
- require a spare building site to enable development to relocate within the property
- provide more assessment criteria;
- prohibit more than one dwelling anywhere in the coastal hazard areas; and
- prohibit protection works in all zones.

There is further explanation for these new and more specific policies.

If these draft 2002 provisions were to become operative in their present form, they would represent a new social contract with the Tauranga community. They would also represent a very clear interpretation and strong implementation of NZCPS policies to coastal hazards at a district level, as follows.

- 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 that 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 that protection works are not an available option.

- There is a commitment (in line with the Regional Coastal Environment Plan) 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.

The Tables 4.1–4.5 indicate that these provisions would be both consistent with, and would apply to Tauranga District coastal hazards in a specific way, almost all the coastal hazard related NZCPS policies.

Appendix 14

Material assistance to support the implementation of sustainable coastal hazard management

When considering the difficulties facing beachfront residents at Wainui Beach, both the High Court and the independent Commissioners 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.

Those decision-makers were clearly uncomfortable with 'sacrificing' the beach front property owners when faced with the win–lose scenario of either the beach being sacrificed or the private property being sacrificed (public good vs private good). The property owners present the human face of immediate need and the loss of a lifetime investment, while the beach presents only a probability of slow degradation and public loss at some indeterminate future time.

Framing the problem in terms of 'sacrifice' and 'win–lose' and 'compensation' is unfortunate, but will continue so long as unsustainable coastal hazard responses are perceived as the only trusted, affordable and coherent response options.

Similarly, beachfront residents who remain without prospect of material support from the same authorities who are denying them the right to protect their properties, will continue to pursue their own vital interests, with the understandable sympathy and support of decision-makers.

One option for overcoming this barrier would be to invest in developing and trialling sustainable solutions to demonstrate their viability – to overcome the short-term cost in order to achieve the long term benefit. Without an initiative like this, the implementation of the NZCPS for the extensive areas of coastal hazard zones with existing development will not be successful, or will be very slowly achieved.

Such an investment may prove to be sound for the following reasons:

- The large costs that will ultimately be shouldered by the community in the future if assets of ever-increasing value are subject to an ever-increasing likelihood of hazards with an ever-increasing cost of maintaining protection works, ie a rapidly increasing total hazard risk (see "Coastal Hazards and Climate Change Guidance Note", page 8).

- The cost of litigation resulting from residents who wish to pursue less sustainable options that will not reduce risk over time.

- The assistance that would otherwise be given in the future by central and local government when private property damage does occur during a coastal hazard event ('the ambulance at the bottom of the cliff').

- The increasing value of beaches and coastal amenity values as a result of a combination of:
  - the loss of coastline space, natural features and amenity values to increasing development;
  - the loss of more coastline space, natural features and amenity values to erosion from climate change induced coastal retreat ('coastal squeeze'); and
  - an increased population wanting access to and recreational use of these finite and diminishing natural and physical coastal resources.

New Zealand could look overseas for the different ways that governments support sustainable coastal hazard management planning and responses.

If central government (or local government with central government assistance and contributions) were to consider such an investment of public money, then it should be explicitly invested to achieve public benefit and sustainable management as well as providing material assistance to beachfront owners before they suffer damage. The investment could thus support a win-win situation.

Development of criteria for, and ways of, providing support would involve social impact and socio-economic research, as well as investigation of sustainable responses.

Criteria could include:
- Funding contributions only for options such as beach nourishment or managed retreat that restore natural character, public access, and amenity values.
- Greater assistance for those who could not reasonably be expected to have known of the coastal hazard risk at the time they invested in their property and/or development.

Ways of providing material assistance could include:
- Contributions to support sustainable options when response options are being determined.
- Undertaking the relocation of assets out of the hazard zone.
- Provision of allotments to relocate to, in exchange for the beach front properties becoming reserves.

Appendix 15:

Possible changes and additions to NZCPS policies in the form of draft policies

1. **Possible wording for a new NZCPS Vision/Objective:**

Natural coastal features which are a natural defence to coastal hazards are enhanced and their integrity protected.

The 'coastal squeeze' effects of protection works, such as seawalls, on coastal habitats, coastal ecosystems, and beaches are avoided or remedied.

Beaches and other natural shoreline features with important Queen's Chain values will be free of property protection works that have the potential to degrade those natural features and their Queen's Chain values.

There will be a net reduction in coastal hazard risk to property assets despite the effects of climate change.

– **Overall vision? To manage coastal hazards in a manner that will ultimately enable coastal communities to live with and have their wellbeing enhanced by natural coastal processes and change, avoiding the need for human intervention with these natural processes.**

2. **Possible wording for changes to NZCPS Policy 3.4.1 and part of Policy 3.4.2:**

NZCPS Policy 3.4.1: "Local Authority policy statements and plans should identify areas in the coastal environment where natural hazards exist."

Part NZCPS 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."

Territorial authority plans shall identify areas in the coastal environment where natural hazards exist.

Those coastal hazard areas in urban zones are to be divided into:

- ***a 'primary threat zone' which is predicted to be affected by coastal hazards within 50 years; and***
- ***a 'secondary threat zone' which is predicted to be affected by coastal hazards within 100 years.***

The coastal hazard predictions shall use the latest Intergovernmental Panel on Climate Change sea level rise figures and predictions of other climate change effects, with local adjustment for New Zealand as determined by the National Institute of Water and Atmospheric Research.

Coastal hazards shall be the subject of research and monitoring programmes to improve knowledge of coastal hazards, and a new coastal hazard analysis and coastal hazard zone review shall be undertaken every 5 years.

Questions:

- Prepared by an experienced coastal hazard consultant in accordance with the "Coastal Hazards and Climate Change Guidance Note"?
- Regional council or district council responsible?
- Timelines/deadlines for councils to achieve this policy?
- Monitoring to ensure compliance?
- Standardised methodology? Bruun's Rule?
- Should lower probability coastal hazards such as tsunami be taken into account in hazard zoning?

3. Possible wording for specifically applying NZCPS Policy 3.3.1 to coastal hazard management

NZCPS Policy 3.3.1: "Because there is a relative lack of understanding about coastal processes and the effects of activities on coastal processes, a precautionary approach should be adopted towards proposed activities, particularly those whose effects are as yet unknown or little understood. The provisions of the Act which authorise the classification of activities into those that are permitted, controlled, discretionary, non-complying or prohibited allow for that approach."

While the quality of coastal hazard information and analysis continues to improve, the complex interaction of coastal hazard drivers, and the natural variability and uncertainty of those coastal hazard drivers (including as a result of climate change) means that a precautionary approach shall continue to be applied to coastal hazard assessment and responses.

Because all models for climate change effects predict increasing sea level rise well beyond the adopted 100-year planning period, a precautionary approach is particularly appropriate for development of responses to coastal hazards.

To the extent that a precautionary approach produces conservative coastal hazard zones, that serves as a prudent extension of the coastal hazard analysis period and/or a buffer for protection of Queen's Chain values.

4. Possible wording for changes to NZCPS part Policy 3.4.2 and Policy 3.4.3:

part NZCPS Policy 3.4.2: "Natural systems which are a natural defence to erosion and/or inundation should be identified and their integrity protected."

NZCPS 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."

The ability of natural features such as beaches, sand dunes, mangroves, wetlands and barrier islands, to protect subdivision, use or development shall be recognised.

Territorial authority plans shall identify those natural features which are a natural defence to erosion and/or inundation that would affect subdivision, use and development in their district, and shall take steps to protect their integrity and enhance their ability to protect the subdivision, use and development.

The value of community-based coast care approaches shall be recognised, including their value for raising community awareness.

In particular, the effects of hard property protection works on beaches, and on the ability of beaches to protect development (and the hard property protection works themselves), shall be recognised.

Question:

- Draw on implementation and good practice in Bay of Plenty and Waikato, and existing guidelines?

5. Possible wording for a new NZCPS policy:

Because of its importance to the sustainable management of natural coastline features and Queen's Chain values, the phenomenon of 'coastal squeeze' on coastlines with a trend of erosion and an armoured shoreline shall be recognised.

Similarly, the phenomenon of 'coastal squeeze' on coastlines in dynamic equilibrium where seawalls have been placed near the seaward edge of the dynamic shoreline envelope, shall be recognised.

6. Possible wording for a new NZCPS policy:

Local authority policy statements and plans shall include methods to promote greater community awareness and understanding of coastal hazards, and greater capacity for and involvement in implementing sustainable coastal hazard management.

7. Possible wording for a new NZCPS policy:

Local policy statements and plans shall support the development of detailed strategies or action plans by the wider community for an integrated response to coastal hazards for particular localities in high threat coastal hazard zones..

Outcomes shall be incorporated into District Plans as far as possible to ensure implementation and long-term monitoring of the action taken and controls imposed.

8. Possible wording for changes to NZCPS Policy 3.4.4 and Policy 3.4.5:

NZCPS 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 the result of dynamic coastal processes (including sea level rise)."

NZCPS Policy 3.4.5: "New subdivision, use and development should be so located and designed that the need for hazard protection works is avoided."

New greenfield subdivision, use and development shall be located and designed to avoid interference with natural coastal processes and the migration of those natural coastal features such as beaches, dunes and wetlands that may migrate inland (including as a result of climate change).

The development setback shall, in addition to avoiding such interference for at least 100 years:

- ***also provide a Queen's Chain buffer of a further 20 metres to ensure that public access and amenity values are protected at least to the end of that period; and***
- ***also incorporate within the setback any significant features that contribute to the natural character or cultural values of the coastal environment.***

The purpose of this policy is to 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.

Question:

– What is the vision beyond 100 years, when it is predicted that the waves will be lapping the Queen's Chain buffer?

9. **Possible wording for a new NZCPS policy:**

Local Authority policy statements and plans shall 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.

Territorial authority plans shall identify those beaches and other natural coastline features in their district which are worthy of inclusion in that network of beaches that are important for their Queen's Chain and tangata whenua values, and shall identify for each natural coastline feature how those values are to be protected and restored. The territorial authority shall take into account:

- ***whether there is a trend of erosion occurring, or likely to occur as a result of climate change;***
- ***the 'coastal squeeze' effects of hard property protection works on natural features seaward of hard property protection works when there is a trend of erosion;***
- ***the practicable alternatives for responding to any coastal hazard threat to property assets; and***
- ***The knowledge and cultural values of tangata whenua.***

10. Possible wording for changes to NZCPS Policy 3.4.6:

NZCPS 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."

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 (100 years) that are available for removing the property assets from the coastal hazard and/or removing the coastal hazard risk from the property assets; and***
- ***Evaluating those long term strategies in terms of the short and long- term effects on both the private property and the natural coastline features. The evaluation shall take into account:***
  - ***the finite nature of natural coastline features and the increasing demand for coastline access and recreation from an increasing population;***

- ***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 where they can experience the Kiwi cultural connection to the coastline and sea can be met; and***
- ***whether the hard property protection works can be located sufficiently landward to avoid interference with the active beach for the majority of the time.***

To assist with both identifying the practicable options for the future and then their evaluation, scenarios under each of the practicable options at 25-year intervals shall be set out explicitly.

Question:
- Should a more directive and seawall focused approach be taken as per the suggested policy in the Dahm peer review?

11. Possible wording for specifically applying NZCPS Policy 3.2.1 and Policy 3.2.2 to coastal hazard management

NZCPS Policy 3.2.1: "Policy statements and plans should define what form of subdivision, use and development would be appropriate in the coastal environment, and where it would be appropriate."

NZCPS Policy 3.2.2: "Adverse effects of subdivision, use or development in the coastal environment should as far as practicable be avoided. Where complete avoidance is not practicable, the adverse effects should be mitigated and provision made for remedying those effects, to the extent practicable."

Territorial authority plans shall create special planning zones for the areas subject to coastal hazards (the coastal hazard zones) with a specific set of rules, standards and assessment criteria.

Territorial authority plans shall classify the construction or erection of all buildings in coastal hazard zones as a restricted discretionary, discretionary, non-complying or prohibited activity, to enable consent to be refused for development that increases coastal hazard risk.

Territorial authority plans and decisions shall recognise that an increase in risk is an effect in terms of both Resource Management Act section 10 existing use right determinations, and the assessment of applications for subdivision and development.

Territorial authority plans and decisions shall recognise that subdivision or development that reduces the options for future property owners to respond to coastal hazard risk has adverse effects.

Territorial authority plans and decisions shall recognise that the significance of the 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.

Territorial authority plans shall seek to avoid an increase in coastal hazard risk through not allowing subdivision and multiple dwellings in coastal hazard zones.

Territorial authority plans shall 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 (or does not increase) the net coastal hazard risk.

Territorial authority plans shall 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.

Question:
- Timelines and/or deadlines for councils to achieve these policies?

12 Possible wording for a new NZCPS policy:

Because:
- ***coastal hazards arise in the coastal marine area and primarily manifest on land;***
- ***the line of Mean High Water Springs (MHWS) is continually moving and rendering the jurisdictional boundary uncertain;***
- ***property protection works generally span the line of MHWS and/or move across it over time; and***
- ***the territorial authority is often a party, or has interests, in proposals to construct coastal hazard protection works;***

the following actions would promote integrated coastal hazard management:

- ***Where coastal hazards are a significant resource management issue in a region, the regional council shall consider preparing a Regional Coastal Environment Plan.***

- ***Policies and rules for coastal hazard protection works in both the regional plan and district plan shall be consistent so as to create an equivalent application and consent process.***

- ***Territorial authorities should transfer to the regional council the consent administration and consideration functions in relation to coastal hazard response works, and/or the Regional Coastal Environment Plan should contain a rule requiring a consent from the regional council for coastal hazard response works.***

Question:

- The Dahm peer review questions whether a requirement for regional coastal environment plans is warranted or appropriate, given the investment of councils in regional coastal plans and the ability of regional policy statements to address cross-boundary issues.

Appendix 16:

Coastal Hazard Related Policies and General Principles, from the New Zealand Coastal Policy Statement 1994 (Selected by the Reviewer)

General Principles

7. The coastal environment is particularly susceptible to the effects of natural hazards.

10. It is important to maintain biological and physical processes in the coastal environment in as natural a condition as possible, and to recognise their dynamic, complex and interdependent nature.

12 The ability to manage activities in the coastal environment sustainably is hindered by a lack of understanding about coastal processes and the effects of activities. Therefore, an approach which is precautionary but responsive to increased knowledge is required for coastal management.

Chapter 1 – National Priorities for the Preservation of the Natural Character of the Coastal Environment, including protection from inappropriate subdivision, use and development

Policy 1.1.1 It is a national priority to preserve the natural character of the coastal environment by:

(b) taking into account the potential effects of subdivision, use or development on the values relating to the natural character of the coastal environment, both within and outside the immediate location.

(c) avoiding the cumulative adverse effects of subdivision, use and development in the coastal environment.

Policy 1.1.2 It is a national priority for the preservation of the natural character of the coastal environment to protect areas of significant indigenous vegetation and significant habitats of indigenous fauna in that environment by:

(c) protecting ecosystems which are unique to the coastal environment and vulnerable to modification including estuaries, coastal wetlands, mangroves, and dunes and their margins.

Policy 1.1.3 It is a national priority to protect the following featuers, which in themselves or in combination, are essential or important elements of the natural character of the coastal environment:

(a) landscapes, seascapes and landforms, including:
   i. significant representative examples of each landform which provide the variety in each region;
   ii. visually or scientifically significant geological features; and
   iii. the collective characteristics which give the coastal environment its natural character including wild and scenic areas.

(b) characteristics of special spiritual, historical or cultural significance to Maori identified in accordance with tikanga Maori; and

(c) 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 resilience of the coastal environment in terms of:

(a) the dynamic processes and features arising from the natural movement of sediments, water and air.

Chapter 3 – Activities Involving the Subdivision, Use or Development of Areas of the Coastal Environment

3.2 Providing for the Appropriate Subdivision, Use and Development of the coastal environment

Policy 3.2.1 Policy statement and plans should define what form of subdivision, use and development would be appropriate in the coastal environment, and where it would be appropriate.

Policy 3.2.2 Adverse effects of subdivision, use or development in the coastal environment should as far as practicable be avoided. Where complete avoidance is not practicable, the adverse effects should be mitigated and provision made for remedying those effects, to the extent practicable.

3.3 Adoption of a Precautionary Approach to Activities with Unknown but Potentially Significant Adverse Effects

Policy 3.3.1 Because there is a relative lack of understanding about coastal processes and the effects of activities on coastal processes, a precautionary approach should be adopted towards proposed activities, particularly those whose effects are as yet unknown or little understood. The provisions of the Act which authorise the classification of activities into those that are permitted, controlled, discretionary, non-complying or prohibited allow for that approach.

Policy 3.3.2 Local authorities should share information and knowledge gained by them about the coastal environment, particularly where it relates to coastal processes and/or to activities with previously unknown or little known effects.

3.4 Recognition of Natural Hazards and Provision for Avoiding or Mitigating Their 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 area 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 the result of dynamic coastal processes (including sea level rise).

Policy 3.4.5 New subdivision, use and development should be so 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

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