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NZCPS COASTAL HAZARD POLICIES

COASTAL HAZARDS, SEAWALLS
AND NATURAL CHARACTER
ARE ALL CONNECTED TO
THE 2004 REVIEW OF THE
EFFECTIVENESS OF THE NZCPS
COASTAL HAZARD POLICIES

Coastal hazards, property protection works and coastline natural character are intimately connected in a story that goes to the heart of a Kiwi icon - holidays at the beach, the beach bach, and generally the important part that the coast plays in growing up as a Kiwi.

Unfortunately, it is a story that has yet to take root in the national psyche in the same way as the stories related to New Zealand's native forests or endangered species. It is a story that needs to be adopted and acted on by communities before development (and the seawalls built to protect that development) "kill the golden goose". The important place of natural beaches and dunes in the lives of most Kiwis is rapidly becoming a thing of the past.

The 1970's saw the first substantial impacts of coastal erosion on new subdivision (notably at Omaha spit) and also a growing realisation of the need for coastal management to 'catch up' with land management. Planning legislation sought to preserve the natural character of the coast and protect it from inappropriate development, but it was not until 1994 that the first statement of national policy arrived to put meat on the bones of those legislative provisions - the NZ Coastal Policy Statement 1994 (NZCPS).

The NZCPS has codified the elements of the story about coastal hazards, seawalls and coastline natural character. It elaborates on what constitutes the natural character of the coastal environment. It also includes policies that seek to:

- Protect the integrity and functioning of natural coastal processes,



Advanced loss of the beach in front of the Raumati South seawall.



Dunes and dry beach in QE Park immediately south of the Raumati South seawall.

- Ensure identification of areas prone to coastal hazards,
- Enhance the ability of beaches, dunes and other natural features to protect development from coastal hazards,
- Ensure development is located and designed so that the need for seawalls is avoided,
- Require consideration of a wide range of options (including abandonment or relocation of existing structures) when development is threatened by a coastal hazard, and
- Permit seawalls only where they are the best practicable option for the future. (The term 'seawalls' is used as shorthand for hard property protection works.)

This article will talk about how successful the NZCPS is on Local Authority coastal hazard approaches to early hazard management.

HOW EFFECTIVE HAVE NZCPS POLICIES BEEN?

The NZ Coastal Policy Statement 1994

(NZCPS) was independently reviewed by Rosier (2004). Contributing to that review was a special review by Jacobson (2004) of the effectiveness of the NZCPS in promoting sustainable coastal hazard management.

The effectiveness of the NZCPS, as assessed in the Jacobson review, may be summarised as:

- Variable performance - The NZCPS is poorest in influencing development consents and district plan provisions related to coastal hazards, best in influencing regional plan provisions.
- Has potential - There is strong consensus that the NZCPS has a valuable role to play in coastal hazard management.
- Shows improvement - After 10 years, plans and consent processes are still evolving towards giving effect to the NZCPS coastal hazard policies.
- Needs understanding - The NZCPS will not perform to its potential until there is better understanding in the community over what it is trying to achieve in coastal hazard management.

- Needs encouragement and appreciation
 - The NZCPS needs government and community champions to gain community acceptance of, and commitment to, sustainable coastal hazard management.
- Would work better as part of a team
 - The NZCPS cannot go it alone – it needs to work with guidelines, legislation, community awareness, market instruments, financial incentives, etc if the obstacles to reaching sustainable coastal hazard management are to be overcome.

Particularly revealing is the common view that the problems with NZCPS effectiveness stem primarily from poor implementation for example, coastal hazard policies are generally OK, but they are not being implemented in the face of proposals to develop or protect ever more valuable hazard prone land.

Poor implementation, in turn, points to a failure by communities to make connections between seawalls and coastline degradation (notably beach degradation or loss). It also suggests that communities have yet to reach a realisation that high quality and readily

accessible beaches and dune systems are a finite resource, and are already scarce along many stretches of coastline.

The more developed urban and suburban areas, where most people live, are also where there is the greatest pressure for seaside development at nearby beaches and cliff edges. This means that if development and protection of coastal hazard prone land continues, most Kiwis are going to be living where there is the least access to high quality beaches with predominantly natural character.

Underlining this apparent disconnect is a strong demand for seawalls even where people's homes are not threatened. Seawalls have recently been proposed in places such as Eastbourne, Urenui, New Plymouth, Castlepoint and Foxton to protect playing fields, golf courses, farmland, flattened dunes, and car parks. This is the case despite clearly practicable alternative options being available, such as dune restoration or activity relocation.

Hard property protection works (such as seawalls) have significant adverse effects on the natural character, quality of environment, public access, and public amenity values that are provided by coastal features such as beaches, dunes, shore platforms and coastal cliffs. 'Coastal squeeze' resulting from seawalls holding the line on retreating coastlines will lead to the disappearance of the features themselves – dunes, dry beaches, and wet low-tide beaches will in turn disappear until waves are continually lapping on rock or concrete walls. This beach loss is evident on the Kapiti Coast at Raumati Beach. Without a seawall, the interchange of sand between dune and beach maintains a nourished beach. This is evident at Queen Elizabeth Park, immediately south of the Raumati Beach seawall.

FUTURE CONSIDERATIONS

In the future, with climate change, more coastlines will be in retreat (i.e. a long term trend of erosion) and hence there will be more instances of 'coastal squeeze'.

It is important to acknowledge that 'coastal squeeze' cannot be mitigated or avoided by non-reflective seawall designs. Non-reflective designs primarily reduce damage to the wall itself, by reducing wave forces and undermining during storms. Like all seawalls, non-reflective designs do not stop erosion (caused by an underlying sediment budget deficit) – they simply confine the erosion to the land in front of the wall (i.e. the beach). The erosion of the beach will therefore continue, hastened by locking up the beach-nourishing sand behind the seawall.

The loss of a beach is not only the loss of a public asset. It is also the loss of a natural wave buffer for the seawall. Over time, the seawall will be subject to increasing wave attack, and the community faces increasing seawall maintenance and upgrading costs.

Yet it remains the case that waterfront residents who vigorously call for seawalls to be built, often on public reserves, co-opt the title of 'beach protection society'. There is often no community group that is vigorously demanding alternative responses, which will deliver long-term protection for the publicly owned beach or other coastal feature. There may be a case for seawalls – but only as part of a 'package' of responses focused on a long-term sustainable outcome (NZ Climate Change Office 2004).

In addition, there is an issue of cost/benefit timeframes - the immediate problem of private property falling into the sea is very apparent to all, while the long term effects of seawalls on public property are less tangible. When communities face an imminent threat from coastal hazards, the most directly affected beachfront residents, and the local council, tend to focus on an immediate 'quick fix' (usually a seawall) that looks reassuringly solid, and is thought to protect threatened private property, remove liability claims, or remove barriers to seaside subdivision and intensified development.

There is a need for a careful examination

of why implementation of the NZCPS is not occurring, and some lateral thinking about what package of initiatives is required to improve implementation.

The Jacobson review has tried to facilitate such broader thinking during the rest of the NZCPS coastal hazards policy review process. The Jacobson report looks at the underlying concepts of sustainable coastal hazard management; references other relevant studies; adopts a forward looking approach to the analysis of NZCPS effectiveness in the Auckland, Bay of Plenty and Wellington regions; and discusses the barriers to achieving sustainable coastal hazard management.

The Rosier and Jacobson reviews are only the first step on the way towards a new and improved NZCPS. The Department of Conservation is currently working to produce a new draft NZCPS. A public consultation process will follow, and there will be ample opportunity for planners to have their say on how sustainable coastal hazard management can be implemented.

It remains to be seen whether the next NZCPS will go beyond improvements to the coastal hazard policies themselves. It could add a vision, goals and explanations to the NZCPS, as well as point towards other initiatives that will promote sustainable coastal hazard management in New Zealand.

REFERENCES

- Jacobson M 2004. *Review of the NZCPS 1994 – Coastal Hazards*. Report prepared for the Minister of Conservation. January 2004. Vols I and II. Wellington, New Zealand.
- NZ Climate Change Office 2004: *Coastal Hazards and Climate Change – a guidance manual for local government in New Zealand*. A NIWA Report.
- Rosier, J. 2004. *Independent Review of the New Zealand Coastal Policy Statement*. A Report prepared for the Minister of Conservation. School of People, Environment and Planning. Palmerston North, NZ.