

Coastal News

Newsletter of the New Zealand Coastal Society
A Technical Group of IPENZ

Number 8

April 1997

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The Coast

How Sustainable the Management?

The Coastal Society's annual seminar, held in Auckland 26-27 September 1996, was focused on putting into practice the principles of Sections 5 and 6 of the Resource Management Act. The quality of the presenters was uniformly excellent and a big thank you goes to the speakers, who obviously put a lot of time and effort into researching their respective topics.

This very successful seminar was attended by just over 100 people, with 22 new coastal society members signing up. The excellent organisation (thanks to those who know who they are!), catering, venue (the Marine Rescue Centre, overlooking the Waitemata Harbour) and having a two-day programme made for a more relaxed environment and the major benefit, apart from the site visits allowing us to stroll along the beautiful eastern suburbs beaches, was invigorating discussions following each of the key papers.

Speakers included:

- the judicial perspective—Judge David Sheppard;
- the practitioner's view of sustainable management—Richard Brabant, Stephen Priestley and Craig Batchelar;
- natural character—Simon Smale, Simon

Swaffield and Boffa Miskell;

- natural coastal values—Graeme Cambell, Greg Hill and Andrea Julian; and
- the Maori perspective—Hirini Matunga and William Kapea.

All the papers presented were bound and provided to the attendees as a useful reference. Notes covering each of the major sessions and short transcripts of the discussions have been made by members of the committee. If other coastal society members would like a copy of the proceedings, these can be ordered at \$20 per copy from Richard Reinen-Hamill, c/- Tonkin & Taylor Ltd, P O Box 5271, Auckland.

Richard Reinen-Hamill

see pages 4 to 6 for more about the September seminar

IPENZ News

Sustainable Management Action Plan Workshop

The IPENZ Sustainable Management Action Plan was first produced in 1994 and formally discussed and endorsed at the Annual Conference in Palmerston North in 1995.

It contained a provision that after three years the Plan should be reviewed and amended. 1997 is the year for review, in time for submissions of any revisions to the 1998 Conference.

The Standing Committee on Engineering and Environment is proposing to run a workshop in July 1997 at UNITEC, Auckland.

The Committee is anxious to obtain feedback from Technical Groups on the use and content of the Plan.

Specifically, answers are sought to the following questions:

- How is the ethos of sustainability being implemented at your branch or within your group?
 - What deficiencies or strengths (if any) have your members perceived in the Plan?
 - If there are deficiencies, how can these be addressed?
 - at the local level?
 - by IPENZ Board?
 - What role is your branch or group taking in promoting sustainability in the local community?
- Further details can be obtained from John Duder (see page 3 for contact details). Replies to these questions should be sent to John by 24 April 1997.

NZ Coastal Society Annual Report

September 1996

Coastal News

The past year since our AGM in June 1995 has seen substantial consolidation of the Society. We shortened our name to broaden our relevance, and have seen membership grow from 180 to 224, including two new corporate members.

The Wellington seminar, "Coastal Hazards: Are We Managing?", was well attended. While no clear answer to the title question could have been forthcoming, the seminar was a definite step to raising awareness of issues and possible solutions.

This year's conference has been well organised and the increased participation is **not** just a function of being in Auckland, but rather of the strong interest in the next question facing us, "The Coast: How Sustainable the Management?". Again, no answers promised but an encouragement to ponder and then act wherever practicable.

This past year has seen three well-produced newsletters, for which we sincerely thank Victoria Caseley and John Lumsden for their editorial and production efforts. Together with our annual seminar, these are one of our key functions—yet they are only as good as your contributions, so we encourage all members to send in local items of interest as well as considered comment on coastal issues and Society activities.

Speaking of the latter, the incoming Committee has two particular tasks to focus on. We now have sufficient funds to support and encourage senior students and younger practitioners to attend New Zealand and Australian conferences, preferably presenting papers and at least reporting back to the Society through meetings and/or the newsletter.

Secondly, we recognise the need and indeed the challenge to set up some form of national archive on coastal management issues and information. This was sparked by the bequest of the Simpson papers by the late R A Simpson, a coastal engineer prominent earlier this century, and the encouragement of his daughter that these papers be properly lodged and accessible. We intend the full set will be the nucleus of at least an on-line database, and a safe repository under Society control for special items.

You will have seen our development plan in the last newsletter. This living document needs

continuing review (see page 8). Please send any comments and suggestions to committee members Felicity Fahy or Andrew Benson.

The plan has been welcomed by IPENZ and cited as a model for other technical groups. It encourages us to be proactive in issues relating to the coast, both bureaucratically and politically. Change takes time, but often starts with individual sustainable commitment.

The other major activity for 1997 is the 13th Australasian Coastal & Ocean Engineering Conference, including the 6th Australasian Port & Harbour Conference in Christchurch 7-11 September 1997. John Lumsden and his team are hard at work to make this a notable event in the 'down under' coastal calendar.

Finally, I would like to thank Fred Smits, our Secretary, and all members of the management committee for their input and support over the past 12 months. The committee was re-elected en bloc at September's AGM and I hope that the momentum and commitment demonstrated at our fully attended August committee meeting can be sustained over the next year.

John Duder

Chairman, Management Committee

Auckland Branch

End of Year Meeting

Topics at this meeting, held on 26 November 1996, included:

- state-of-the-art sail design
- America's Cup debate
- regional roundup

A lively and entertaining tale on the in's and out's of sail design for America's Cup racing yachts and the practices required was given by Burns Fallow of the North Sails Group.

Burns was the first graduate of the Yacht Research Unit at the University of Auckland and manager of the 1995 Team New Zealand Sail Design. He is an acknowledged world expert on the design of mainsails and genoas. He has been involved in the design and construction of the wind tunnel at the Tamaki campus and is currently designing sails for Grant Dalton.

The ARC gave an update on the status of the America's Cup application, followed by a review of activities in Auckland and Waikato for 1996.

Coast Care Update

Coast Care is a coastal management programme run through the Parks Unit of the Christchurch City Council and operates under the guideline of the policies in the Policy Document produced by the Parks Unit. The programme has a five-year budget of \$5 million, including a maintenance budget.

The priority for Coast Care is controlling and preventing erosion by planting, providing well-designed public access and by controlling the movement of sand.

This management view must be integrated with the view that dunes are an important buffer to natural hazards.

Conditions in the consent granted to the City

Council allow for two types of dune stabilisation activities:

- full dune recontouring for the most serious erosion problems; and
- dune frontslope regrading for smaller erosional features.

So far, two full dune recontours have been completed at Bellamy Avenue and Thompson Park. Initial planting at these sites with iceplant has been successful.

Stabilisation work has recently started on the dunes with serious erosion problems around the New Brighton area.

Melanie White

Rodney Chambers

Coastal News



Recontoured dunes at New Brighton Beach, September 1996 (photo: John Lumsden)

Management Committee

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- Fred Smits (Secretary), NIWA Oceanographic, P O Box 14901, Wellington, Ph (04) 386 0369, email: f.smits@niwa.cri.nz
- Andrew Benson, ARC Environment, Private Bag 68-912, Auckland, Ph (09) 379 4420, email: abenson@arc.govt.nz
- Dick Carter, Wellington Port Company, P O Box 794, Wellington, Ph (025) 477 675
- Victoria Caseley, Davis Ogilvie & Partners Ltd, P O Box 579, Christchurch, Ph (03) 366 1653, email: victoria@dop.co.nz
- Jim Dahm, Environment Waikato, P O Box 4010, Hamilton, Ph (07) 856 7184, email: jimd@wairec.govt.nz
- Felicity Fahy, ARC Environment, Private Bag 68-912, Auckland, Ph (09) 379 4420, email: ffahy@arc.govt.nz
- Wayne Hastie, Wellington Regional Council, P O Box 11646, Wellington, Ph (04) 802 0337, email: wayne@wrc.govt.nz
- Ewen Henderson, Boffa Miskell Ltd, P O Box 91250, Auckland, Ph (09) 358 2526
- Mike Jacobson, Department of Conservation, P O Box 10420, Wellington, Ph (04) 471 0726
- John Lumsden, Coastal Consultant, P O Box 8515, Christchurch, Ph (021) 669 701, email: j.lumsden@cae.canterbury.ac.nz
- Peter Steel, Beca Carter Hollings & Ferner Ltd, P O Box 3942, Wellington, Ph (04) 473 7551, email: pbs@beca.co.nz
- Eric Verstappen, Tasman District Council, Private Bag 4, Richmond, Ph (03) 544 3417
- Dave Peacock (corresponding), Gisborne District Council, P O Box 23, Gisborne, Ph (06) 867 2049

Is the Resource Management Act Bringing Sustainable Management to the Coastal Environment?

Synopsis of address by David Sheppard, Principal Judge,
New Zealand Environment Court

Coastal News

The understanding of sustainable management of the coastal environment has been developed during the first half-decade of the Resource Management Act regime.

The New Zealand Coastal Policy Statement is an authoritative prime source. It sets out general principles and states national priorities for the preservation of the natural character of the coastal environment, including protection from inappropriate subdivision, use and development. It also contains policies on:

- protection of characteristics of the coastal environment of special value to tangata whenua;
- adopting a precautionary approach to activities with unknown but potentially significant adverse effects; and
- public access to and along the coastal marine area. There are also policies on Crown land in the coastal marine area and on principles of the Treaty of Waitangi.

The landward boundary of the coastal marine area has to be defined in a practical way so that the boundary is readily ascertainable and so people can tell without difficulty which set of rules applies and which consent authority has authority.

Planning Tribunal decisions show the effect that the Act is having on management of the resources of the coastal environment. Offence to Maori relationships with ancestral waters can prevail even over worthy public interest, but claims of that kind are not always made out, and if they are, they are not always decisive in the face of strong countervailing interests. Mining of sand from the coastal environment has to be sustainable. However, the resource consent process is not apt for resolving Maori claims to ownership of the sand resource, grievances about failure to comply with the Treaty of Waitangi or disputes between hapu or whanau over which has mana in a particular area. Local iwi can be given monitoring roles where they are able to assist in sustainable management of the resource.

The preservation of natural character of the coastal environment is not an end in itself, but it is to give way only to nationally suitable or fitting development. So proposed developments in the

coastal environment that were otherwise worthy have been refused. Careful judgment is required to decide whether consent should be granted for development in the coastal environment.

Sustainable management has little room for tolerance of contamination of coastal waters. Even for disposal of treated sewage effluent, it is usually necessary to show why land disposal would not be practicable, and the best practicable option or highest standards of treatment would be expected. Value is given to allowing for traditional uses of coastal waters by tangata whenua. Even marine farming may not be consistent with sustainable management of natural resources because of visible impact on the natural character of the coastal environment, effects on tangata whenua interests, or because of effects on benthic ecology.

Lyttelton Marina Development

Development of Lyttelton Marina has been jointly proposed by the Lyttelton Port Company and the Banks Peninsula District Councils. Three stages of development have been proposed, and the third stage is due to commence in 2004.

During hearings, the main submitters were the Department of Conservation, who expressed concerns over public access, the effects of berths in close proximity to Magazine Bay and the effects of the marina on waves and currents in the harbour. Major consent conditions required the floating breakwater to be curved, the removal of eight berths closest to Magazine Bay and the requirement for an environmental monitoring programmes for the discharge permit. Six-monthly monitoring of suspended solids and hydrocarbons over five years is also required.

The problem of conflicting user groups has been identified:

- access will only be restricted to the walkways and only at certain hours; and
- individual ramps for powerboats, sailboats, dingys and windsurfers will be available. This means that boaties not in the marina will still be able to use the facilities.

Victoria Caseley, Davis Ogilvie and Partners

The Protection of Natural Coastal Values An Overview

by Dr Graeme Cambell

Graeme built on the earlier speakers who addressed sustainable management and natural character to focus on natural coastal values. He posed several points. First, the RMA carries with it the imperative to “protect”. Then, action must be regional and management must be integrated. Policy techniques are important, as is public support.

The imperative to protect

In considering the imperative to protect, Graeme drew on the provisions of Section 6 of the RMA for protection on natural features and landscapes and areas of significant vegetation and fauna. This was, he emphasised, a necessary part of Section 5 (the promotion of sustainable management), and while other matters had to be considered, this was a clear direction under the legislation. He referred to Greig (the NZ Rail decision) and maintained that in writing policy, some councils responded with too narrow a perspective to that decision with preservation of natural character subordinate to the promotion of sustainable management. Protection is an essential ingredient of sustainable management.

Other cases had favoured protection of the natural character of the coastal environment against development.

Regional action

Regions, Graeme said, need to produce meaningful and effective regional plans and while seeking improved integration, should provide direction if not a constraining effect on territorial authorities.

Integrated management

Integrated management is provided for by later sections of the RMA (30, 31 and 39). In referring to S.52(c), Graeme said he felt that provision is often watered down with emphasis more on the need to “remedy” or “mitigate” effects rather than to “avoid” them.

Part III of the Act gives credence to integrated management as a bridge for resource and constitutional issues. Effects in respect to other natural resources need to be considered within and across media (air, water) issues, across agencies and across time. Integrated management serves the purpose of the Act.

The regulation of the extent of urban activity was acceptable if it achieved integration.

Policy techniques

Policy approaches and techniques of today were foreshadowed by the Draft Auckland RPS in the 1980s through a performance-based approach. Protection of the natural functioning of natural values was emphasised rather than the protection of the site itself. The developer had to prove no adverse effect. Blanket prohibition was not the objective.

This led to the need to know more about biology, geomorphology, geology and ecosystems of the region. The principle of “representativeness” was accepted.

There is now a need to consider how ecosystems can be used to achieve sustainable management. Processes and interactions are important.

Reference was made to Geoff Parks’ forthcoming book. Section 35 of the Act—state of the environment reporting—offers exciting opportunities.

Public support

Finally, Graeme emphasised the need to bring decision makers and the public with us to promote sustainability.

Coastal News

Corporate Members

- Auckland Regional Council, Private Bag 68-912, Auckland
- Beca Carter Hollings & Ferner Ltd, P O Box 3942, Wellington
- Canterbury Regional Council, P O Box 345, Christchurch
- Environment Waikato, P O Box 4010, Hamilton East
- NIWA Marine, P O Box 14-901, Kilbirnie
- OCEL Consultants Ltd, P O Box 877, Christchurch
- Taranaki Regional Council, Private Bag, Stratford
- Tonkin and Taylor Ltd, Consulting Engineers, P O Box 5271, Auckland

Progressive Sustainability in the Coastal Environment

by Greg Hill (Planner ARC Environment) and Dr Andrea Julian (Ecologist Consultant)

This joint presentation focused primarily on S.6(b) and (c) of the Resource Management Act—protection of outstanding natural features and landscapes and the protection of areas of significantly indigenous vegetation and significant habitats of indigenous fauna.

The authors' experience with regional policy development, and particularly the drafting of the Regional Plan—Coastal, was the basis for the presentation. A series of issues, drawn from the Act, were used to structure the approach to the preparation of the plan. Areas that are of regional, national or international significance are identified in the plan as Coastal Protection Areas (1 & 2).

Development is encouraged into areas where natural values are already highly modified or compromised. And finally, any use and development proposed has to avoid, remedy or mitigate adverse effects. Lack of information required

more work (Andrea's) to improve specificity for the Plan.

Shortcomings have surfaced in meeting the requirements of the Act. The RMA has little or no control over methods used to harvest fish; no national standards for introduction of undesirable aquatic species (and ballast water) and lack of national standards on marine pollution were commented on.

The paper appended a document "How the Plan Promotes the Sustainable Management of the Coastal Environment", which it is proposed to insert in the Regional Plan—Coastal. This is expected to provide an improved understanding of what the plan seeks to do and how it will operate in practice.

Both practitioners spoke to their particular contributions to the preparation of the Plan. The research and assimilation of ecological data was a key component.

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Alternative Method of Gravel Extraction at South Beach, Timaru

As part of port expansion, the Timaru Port Company wish to reclaim a large area of their operation. At present, allowable rates of extraction (15,000 cubic metres/year) from South Beach, it would take 30 years to complete the required reclamation, which is not an acceptable timeframe.

In the past, gravel has been extracted from a

single site in a quarry-like excavation with no regard for coastal processes. It has been estimated that it may be appropriate to extract 30-40,000 cubic metres/year from South Beach, but it is recognised that the sediment regime is naturally variable and that any management plan must recognise this variability.

The proposal is to change the method of gravel take to one where layered cuts can be taken over an increased area down to a specified profile (a minimum width and volume) without having any actual maximum extraction limit. This means that far more gravel can be extracted, although amounts will vary depending on sediment availability.

Selected profile limits are known, surveyed profiles of which have been sufficient to withstand severe storm events in the past.

For the northern area of South Beach, the 1980 surveyed profile has been identified as being appropriate. For the southern area, the 1990 surveyed profile is appropriate.

Derek Todd

Tonkin and Taylor Ltd



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For more information please contact Fred Smits by phone (04-3860379) or by fax (04-3861585)

NIWA Sea Level Projects

NIWA currently has involvement with six sea level projects. A network of sea level recorders has been established along the Canterbury coast. Already existing recorders include ones at Kaikoura, Sumner Head, Moturiki Island and Jackson Bay. Funding has been allocated for a further six.

Canterbury Coast Modelling

Canterbury coast modelling extends from the Canterbury coast out to 1000 km beyond the Chatham Islands. It recognises significant sea level features such as:

- sea level at Sumner has a low response to barometric pressure;
- there is a predominance of semi-diurnal tides;
- the main influence is one of perigean/apogean tides rather than fortnightly spring/neap tides;
- identification of persistent 3.4 h period waves oscillating on tidal troughs of peaks;
- winds excite these 3.4 h period waves independent of direction;
- at Kaikoura, sea level is more responsive to barometric pressure and in general behaves more like an open ocean environment.

This last point emphasises the importance of having a recorder at Kaikoura.

Extreme Waves for Christchurch

If a tsunami collided with these 3.4 h period waves, it would be amplified several-fold.

NIWA will apply the Canterbury coastal model to calculate maximum sea levels from the Waimakariri to Scarborough. This will include tides, storm surge and long period waves.

Other Projects

Other projects include:

- 2D hydrodynamic modelling of New Zealand's Exclusive Economic Zone up to the 5000 m contour;
- sea level inundation risk analysis in conjunction with a consortium of five regional councils to calculate joint probabilities of tide, storm surge and long period waves; and
- North East coast modelling.

*Derek Goring
NIWA, Christchurch*

Next Newsletter

Deadlines for contributions for the next newsletter is 31 May. Send contributions to Victoria Caseley (Contact details page 3).

Pacific Coasts and Ports '97 Conference

Christchurch, 7-11 September 1997

Members are reminded to note the dates of this international coastal conference, which is to be held in the new Christchurch Convention Centre.

Planning for the conference is proceeding well and indications are that several hundred delegates will attend. The response to the Call for Papers has far exceeded early expectations and over 230 abstracts have been received from 22 countries. There will be approximately 60 papers from New Zealand, 90 from Australia and 80 from other countries.

The Registration Brochure is presently being prepared and the Conference Committee hopes to have this distributed by the end of April. A full four-day programme of technical papers and site visits interspersed with various social events, including a conference banquet, is being organised.

Coastal Society members should receive a copy of the Registration Brochure and are urged to support the society and the conference by attending this important event.

*John Lumsden
Chairman, Conference Committee*

Proposed Clifford Bay Ferry Terminal

Tranz Rail's future plans include the introduction of new ships that are wider, longer and higher. These new ships would exceed the capacity of existing operations at Picton, and Clifford Bay is considered an appropriate site to build the larger facilities required. Moving the terminal to Clifford Bay will reduce the Wellington to Christchurch trip by up to two hours (including road travel time and time spent on the ship).

A major feature of the new facility will be a 1 km, 10 ha operational area and a 1.5 km long breakwater.

Major issues regarding the coast will be the reclamation of these large areas, which are expected to require 1.9 million cubic metres of rock.

At this stage, engineering and environmental consultation has been undertaken and consent applications will soon be lodged.

*Russel Herbert
Tranz Rail Limited*

Coastal News

New Zealand Coastal Society: Two-year Development Plan (1997-1998)

Goal	Objective	Implementation	Performance Measures												
To promote the sustainable management of natural and physical coastal resources	To facilitate discussion of the issues, values and uses of the coastal environment	<ul style="list-style-type: none"> provide a forum for sharing of individuals' knowledge with the Society encourage Society members to present papers to appropriate conferences and other forums comment on national discussion papers send newsletter to all relevant public and private organisations 	<ul style="list-style-type: none"> organisation of regional meetings and annual national seminar papers presented and prepared for publication, including the Society newsletter provide written comment within specified timeframe newsletters sent regularly 												
To promote the Society	To promulgate the Society's goals and objectives to interested parties	<ul style="list-style-type: none"> liaise with other relevant groups, societies and organisations send newsletter to other groups, societies and organisations, and encourage reciprocation encourage members to promote the Society to others interested in the coastal environment 	<ul style="list-style-type: none"> communication with two new groups, societies or organisations per year newsletters sent regularly 20 promotions of the Coastal Society per annum nationally 												
To increase the individual and collective knowledge of the Society	To provide education and development opportunities and to assess the further training and development needs of members	<ul style="list-style-type: none"> organise seminar and conference canvas members on training and development needs and begin developing courses support young practitioners to present papers to regional, national and international meetings and conferences through grants where appropriate 	<ul style="list-style-type: none"> annual national seminar plus regional meetings, Pacific Coast & Ports '97 Conference identify topics by 30/6/97 at least one grant per year 												
To provide a valued service to Society members	To increase the service to Society members	<ul style="list-style-type: none"> canvas needs of members compile regular newsletters facilitate inter-organisational networking develop and support activities in regional branches organise talks/lectures by relevant national/international experts establish a skills/information database 	<ul style="list-style-type: none"> survey completed by 1/3/97 three newsletters per year enhanced communication increased number of activities of regional branches—two events per year two talks organised per year evaluate needs and propose systems by 1/6/97 												
To increase public understanding of coastal environment issues	To disseminate important information to the public on relevant coastal environment issues	<ul style="list-style-type: none"> present view of the Society on coastal management matters prepare papers, magazine and newspaper articles that reach the public send newsletter to all major New Zealand libraries 	<ul style="list-style-type: none"> timely dissemination of Society view timely preparation of articles newsletters sent regularly 												
To increase membership of the Society	To promote the Society to interested parties	<ul style="list-style-type: none"> promote value of Society identify and target potentially interested parties, notify them of the Society's activities, and invite them to join the Society emphasise value of multi-disciplinary involvement 	<p>Membership increased:</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>1/10/96</th> <th>1/10/97</th> </tr> </thead> <tbody> <tr> <td>• individual members</td> <td>200</td> <td>250</td> </tr> <tr> <td>• student members</td> <td>15</td> <td>20</td> </tr> <tr> <td>• corporate members</td> <td>10</td> <td>12</td> </tr> </tbody> </table>		1/10/96	1/10/97	• individual members	200	250	• student members	15	20	• corporate members	10	12
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