Coastal news

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Newsletter of the New Zealand Coastal Society: a Technical Group of IPENZ

Contents

New Zealand's First Marine Lock

Kawana Waters in Mooloolaba

As the demand for coastal property results in a shortage of land and inflated prices around the country a number of developers have come up with innovative ideas for waterfront estates.

Marine lock, Noosa

Hopper Developments Ltd have always been at the forefront of innovative waterfront development with examples such as Pauanui Waterways but now they have taken the term 'innovative' one step further with a canal scheme incorporating New Zealand's first marine lock at Marsden Cove on the shores of the Whangarei Harbour.

Hopper Developments, an Orewa-based father and son company, formed in 1953, first got involved in ordinary coastal developments around the North Shore, the Hibiscus Coast and Coromandel Peninsula.

At Cook's Beach on the Coromandel the Hoppers took the additional step of

Marine lock, Kawana Waters, Mooloolaba

NZCS Conference — October 12-15 2005, Tutukaka, NZ

Coastal Problems? Innovative Solutions.

See back page for details and insert for registration information

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www.coastalsociety.org.nz

including two freshwater lakes within the 250-lot subdivision so more homes would have a water view.

Next they produced the country's first canal housing development, at Pauanui, also on the Coromandel. When the final stage is finished early next year there will be 250 lots each with canal frontage and the ability to build a jetty and boat ramp.

That has been followed by Whitianga Waterways, an extension to the existing town of Whitianga, which will eventually have 1500 sections, 700 of them with canal frontage, plus waterfront retail and tourist facilities.

Now, at Marsden Cove, Hoppers are starting work on an even more complex engineering exercise by incorporating a marine lock.

Marsden Cove is a joint venture between Hopper and the Northland Port Company and aims to provide 700 sections, 450 of them with canal frontage, plus a marine village and a 250 berth marina on 130 hectares of land at One Tree Point.

Unsurprisingly the project has taken about six years to surmount the various planning hurdles which have included hearings by Northland Regional Council and Whangarei District Council, appeals to the Environment Court and finally a decision from the Minister for the Environment.

It has been helped along the way by strong backing from the local community with the Ruakaka Ratepayers Association passing a unanimous resolution of support.

The most contentious aspect is the dredging of a 25 m long access channel 600 m into Marsden Bay involving the removal of 100,000 sq m of foreshore and seabed material. At one stage the developers had approval to build the canals and the subdivision but not to create access to the sea.

Lock gates, Kawana Waters, Mooloolaba

But the access channel, too, was supported by the ratepayers association which pointed out that it was a lot smaller than the regular dredging done for the nearby port. President Roger Neal says the developers made every effort to avoid shellfish beds and keep environmental impacts to a minimum. In addition, suitable dredged sand will be made available to the Council to enable them to complete their long held plan for beach nourishment along the One Tree Point shoreline adjacent to the access channel.

Earlier this year, after extensive mediation between the developers and remaining objectors, the necessary restricted Coastal Permits were issued by the minister.

Phil Rhodes, who is managing the project for contractors Evans Young, says he never doubted it would eventually get approval. "I had confidence in the project, I knew it was good, environmentally sound and would be successful in terms of what the market was looking for."

The consenting and design process for Marsden Cove is being carried out by a New Zealand consultancy team of Airey Consultants, Boffa Miskell Ltd, Earthtech Ltd and Tonkin & Taylor Ltd.

The first stage, now underway, is relatively straightforward, involving 101 sections mostly around a standard canal development, the marina, a public boat ramp and a dry stack boat storage facility (www.nzcoastal.com).

The more interesting stage will see the creation of a much larger subdivision around saltwater canals, with access to the sea via a marine lock, designed to maintain water levels at low tide.

Tonkin & Taylor Ltd are investigating water quality aspects using numerical models to optimize water exchange and have developed the initial weir and lock configuration. The main exchange of water will be across a 25 m wide weir with a crest elevation of around 2.0 m + CD, enhanced by large diameter culverts discharging at strategic locations into the uplock canal system. The weir will reduce tidal fluctuations from around 2.8 m below the lock to less than 1.0 m, substantially reducing construction costs and providing an attractive water surface at all tides.

Such developments are quite common both across the Tasman and more generally overseas but this is the first of its kind in New Zealand.

Rhodes says the model being followed is Oyster Cove on Queensland's Gold Coast. The work is being carried out by one of Australia's leading consulting engineer companies, the Cardno Group (www.cardno.com.au).

"We're getting the Aussies to design the lock for us," says Rhodes, "because they've had a lot more experience of this sort of thing."

Cardno have lead the way in the design of navigational lock and weir systems to provide access from residential waterway estates to tidal waters. They designed the first such system in Australasia at Noosa, Queensland and have since furthered the concept with other projects including Kawana Waters, Mooloolaba and Oyster Cove.

Oyster Cove, which will eventually have 800 canal front sections, a golf course and a hotel, was built by Leighton Contractors (www.leightoncontractors.com.au) and involved the excavation of 800,000 cu m of material.

The Oyster Cove development had to start without the canals having access to the sea but that was later provided by way of a marine lock. The lock took 13 months and cost A$2.4 million to construct but has been operating now for five years.

It allows vessels up to 15 m long to pass from the non-tidal canals to the adjacent tidal Broadwater. According to Leighton's it also "maintains constant water levels in the canals and prevents increased tidal flows in adjacent creeks and rivers."

Environmental monitoring of the development is being done by consultants URS (www.ap.urscorp.com/air_water_env.projects.htm) and particularly focuses on water quality in the canals and adjacent waterways. Its role includes supervising regular testing of the water for potential acidity and a liming programme designed to ensure the water stays neutral.

Rhodes says maintaining water quality will certainly be a crucial requirement for Marsden Cove. "The lock will be interesting because it's a first," he says, "but there's nothing particularly difficult about it. The key thing will be ensuring a good flow of fresh seawater into the canals so the water quality is maintained."

The 2005 NZCS Conference at Tutukaka will include field trips to the Marsden Cove development.

Photos in this article courtesy of Cardno Ltd

Marine lock, Kawana Waters, Mooloolaba

Climate Change and Coastal Erosion – What is the Link?

Development along New Zealand's coasts may be susceptible to erosion according to NIWA's Dr Mark Dickson.

A recent article in *Coastal News* (issue 27) noted that there is a changing view of coastal property in New Zealand: where once beach-side properties were viewed as holiday retreats, coastal land is increasingly being purchased as an investment. As a result coastal land is being developed at an increasing rate and coastal property prices have escalated sharply.

The development of coastal land is not restricted to New Zealand – around the world coastal populations are growing at about twice the rate of global populations. While the reasons for such intensification of land use are highly regionalised, everywhere there is increasing risk associated with hazards such as coastal erosion, inundation by high tides and storm surge, and tsunami.

One of the problems associated with intensification of coastal development is that it is occurring at a time when about 70% of sandy beaches around the world are thought to be eroding. Likewise, while a significant portion of coastal development occurs on cliff-top land, cliffs themselves are indicative of a history of erosion.

Exacerbating these concerns are suggestions that the widespread trend of beach erosion may be attributable to the global rise in sea level that has been recorded in tide gauges around the world (and in New Zealand) over the 20th century. Cliff erosion is also thought to be sensitive to sea level rise, as rising water levels continually allow waves to attack the base of cliffs. The links between erosion and sea level rise are worrying, for many scientists agree that global warming may result in significantly higher rates of sea level rise over the 21st century.

While there is a level of debate regarding global warming and the magnitude of sea level rise that is to be expected (see the editorial in *Coastal News* No. 27), there is little argument that it is prudent for coastal planners to try to take account of possible future impacts in coastal management plans. However, at present a number of fundamental questions forestall the development of plans that are capable of confidently considering questions of coastal erosion and climate change.

Examples of such questions include:

- Is global sea level rise resulting in the widespread erosion of beaches?
- Is global sea level rise accelerating the erosion of coastal cliffs?
- If the rate of sea level rise accelerates, will rates of erosion also increase?
- How do we manage risk associated with these threats – are we better off defending the coastline (e.g. seawalls, groynes) or are natural coasts more resilient to the effects of sea level rise?

In response to questions such as these the Foundation for Research, Science & Technology has funded Dr Mark Dickson on a three-year project entitled 'Predicting Future Shoreline Positions in New Zealand for Hazard Risk Assessment.' Dr Dickson is based at the National Institute of Water and Atmospheric Research where he is working with colleagues on the development of numerical models to help understand and predict the future of eroding cliffed coastlines in New Zealand.

The work that is being conducted follows on from research conducted by Dr Dickson and colleagues at the University of Newcastle upon Tyne in the

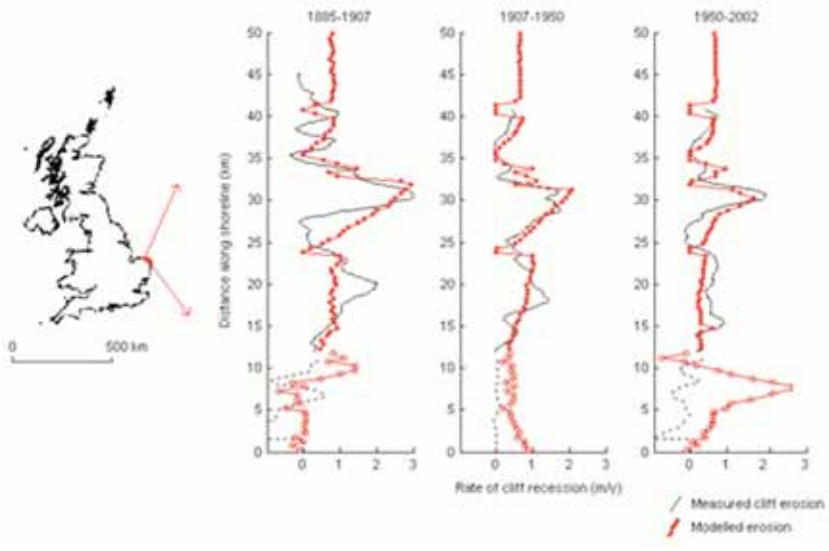


Figure 1. Model erosion rates were compared with erosion rates measured from historical maps over three periods of time, 1885-1907, 1907-1950, 1950-2002. Model predictions are close to measured erosion rates along the extent of the cliffed coast which runs on the vertical axis from about 13 km to 45 km. This section of coast is in Norfolk, UK.

Figure 2: This image shows model predictions of cliff erosion at a town in Norfolk under a hypothetical scenario in which a cliff-toe seawall is removed. The bold lines indicate future predicted cliff positions at 10-year intervals between 2000 (black) and 2050 (purple). Roads are indicated by red lines, buildings by grey blocks, and a pier can be seen protruding into the sea on the right of the figure.

UK in which a numerical model called SCAPE (Soft Cliff and Platform Erosion Model) was developed and used to assess the effects of climate change on eroding cliffs.

An important feature of the modelling philosophy, and one that diverges from conventional modelling methods, is that rather than using very detailed numerical descriptions of processes, attention is focussed on providing relatively simple numerical descriptions of only the most important interactions that occur within an eroding system. In doing so, attention is focussed on interrelationships, feedbacks, and the emergent properties of eroding systems.

In a case study of erosion in Norfolk, UK, the model performed very well over a spatial scale of tens of kilometres and a temporal scale of decades. When model predictions of erosion rates were compared with cliff positions measured from historical maps, the model was validated over more than a century (late 19th century to the present day). This provided confidence to assess different scenarios of climate change and cliff management between 2000 and 2100.

The model runs suggested that cliff erosion in Norfolk may be relatively insensitive to increases in offshore wave heights owing to the dissipative effect of shallow bathymetry in the North Sea. By contrast, changes in offshore wave direction had a more significant effect. However, the most significant effect of potential climate change was in respect of increasing rates of sea level rise.

A very interesting result from this case study was that the rate of cliff erosion did not increase equally for all sections of coast. Whereas some sectors eroded about 50% faster under higher rates of sea level rise, some sectors actually retreated more slowly than normal! The reason for this is found in the way in which sediments are transported alongshore. For instance, high rates of cliff erosion in one region may generate large volumes of sand which, upon transportation alongshore by waves, may bulk beaches in an adjacent sector of coast, thereby buffering that area from cliff erosion.

One of the fundamental benefits of 'complex systems models' is that a broad range of coastal responses to varied scenarios can be assessed. So in contrast to widely used tools such as the Bruun rule, the models can be used to monitor several important aspects of eroding coasts, including the size of beaches and the level of rocky platforms. With colleagues at NIWA, model development is currently in progress for different stretches of New Zealand's coast. At present attention is focussed on the coast around the Waitaki River in which it is hoped that the systems approach will allow us to decipher the effects of dam construction, natural variability, historical sea level rise, climate change, and land-use practices on patterns of cliff erosion, barrier breaching and coastal flooding.

Dr Mark Dickson
FRST Postdoctoral Fellow, NIWA

Figure 3. Eroding sea cliffs north of the Waitaki River. These cliffs are fronted by a gravel beach that helps protect the cliff from erosion. When a critical threshold is exceeded waves erode the cliff. Over the long term erosion rates on this coast average about 1 m/yr.

Coastal News

2005 Student Scholarship Awards

The New Zealand Coastal Society offers scholarships to students or recent graduates aimed at encouraging them to present a paper or a poster at the society's annual conference.

The Management Committee of the New Zealand Coastal Society is pleased to announce that two awards of $500 each have been made for 2005. Congratulations are due to:

- Ryan Paulik who is studying for a Masters degree at Victoria University of Wellington (Earth Sciences). Ryan's paper is entitled: "Estuarine shore platforms of the Whanganui Inlet, South Island, New Zealand: Morphology and Processes"; and
- James Taylor-Cyphers who is in his honours year studying for a Bachelor of Planning at The University of Auckland. James's paper is entitled: "A best practice toolkit: Coastal planning in the Pacific island context".

Details of the requirements for Student Scholarships for 2006 will soon be posted on the web-site.

In the meantime, information concerning the scholarships can be obtained by contacting Dr David Kennedy (david.kennedy@vuw.ac.nz). Applicants must be current members of the society.

The views expressed by the authors of articles published in *Coastal News* are not necessarily those of the New Zealand Coastal Society (NZCS), or those of the Institution of Professional Engineers New Zealand (IPENZ).

The *Coastal News* merely provides a forum for discussion. We appreciate all contributions and would like to thank all of the authors in this edition.

If you would like to contribute an article, news item or conference announcement to *Coastal News*, see the guide for contributors on page 18.

Building a Brighter Future for the People of Bua in Fiji

Fiji's Ministry of Fisheries and Forests (MFF) have commissioned a team of Beca specialists, in conjunction with Erasito Consultants in Fiji, to undertake planning and development for a greenfield port development at Wairiki in the Bua region of the island of Vanua Levu. The new port development will facilitate the export of wood chip from the island's considerable plantation forestry reserves by providing a more economical means of getting the woodchip to the world market. The facilities will include a dedicated berth, access roading and site development for an associated chipmill. Later it is expected that a sawmill will be developed on the same site. Investment in this new infrastructure will promote economic growth and support the island's developing timber industry. The Fiji Government has stated that the implementation of this project in the Bua region will help achieve sustainable economic growth in the region, fight poverty and raise living standards of the people of the region.

The large size of ships coming required for the wood chip (up to 200 m, with a draft of 11 to 12 m) meant careful assessment of potential sites was required. Beca and Erasito began with a review of the MFF's site selection process and agreed that, of three possible sites, Wairiki was the better site - requiring the shortest wharf structure and having deep water closest to the shoreline. Other sites would require extensive reclamations, which have been avoided at the Wairiki site. The team then developed options for the new wharf and chip loading facility, road access from the chipmill/sawmill site down steep terrain to the wharf, and staged development of the mill site. Cost estimates for each alternative concept were presented to the MFF, who confirmed their chosen options before detailed design.

An environmental impact assessment (EIA) was prepared by the Beca/Erasito team. This work included technical coastal process and biological investigations of the existing environment and anticipated impacts on that environment. Consultation was undertaken with the villagers in the vicinity of the project as well as with the

Figure 1: View of the foreshore at the site

Figure 2: View of the site for the new facilities

stakeholders. Mitigation measures were recommended for the significant adverse impacts. The draft EIA was presented to the Department of Environment in Fiji in April 2005. The Department has provided approval for the report and the project. Geotechnical investigations have also been completed and now will be followed by detailed design, led by the Beca/Erasito team.

The conditions requested by the Department of Environment have been incorporated into the tender documents for construction of the first stage of Bua Port. These documents were released in early May 2005 and it is expected that the port will be complete by mid 2006.

For more information, contact Richard Frankland, richard.frankland@beca.com or Lucy Brake, lucy.brake@beca.com

Figure 3: Consultation underway at the settlement of Nacewa

Seeking Contributions to *Coastal News*

Your contributions to Coastal News are welcome. These contributions are important to keep NZCS members informed about coastal issues in New Zealand and around the world. Contributions may be in the form of advertisements, notification about conferences or workshops, short news items, or longer articles of 400-800 words plus photos or diagrams.

For further information or to submit an idea please contact Alex Eagles, Editor, Coastal News on penguins@clear.net.nz.

News from the Regions

Coastal News

Northland Region

André LaBonté, NZCS Northland Regional Coordinator

Recognition for Coastal Community Group

The Mangawhai Harbour Restoration Society (MHRS) was presented the annual award for New Zealand's "Best Coastal Community Group" at the Coastal Dune Vegetation Network annual conference hosted by the Whangarei District Council in February. The award recognized their 10 years of harbour restoration and dune revegetation work. Following the termination of nearshore sand mining at Mangawhai, the MHRS supported the Friends of Pakiri Beach in their opposition to the renewal of consents for nearshore sand mining at a resource consent hearing held at the ARC in February. The hearing committee has recommended to the Minister of Conservation that these applications be declined. Seatow Ltd. and McCallum Brothers Ltd. have appealed the decision.

Bay of Plenty Region

Aileen Lawrie, NZCS Bay of Plenty Regional Coordinator

Study Looks At Aquaculture Potential

Environment Bay of Plenty has initiated a science research project on Aquaculture Management Areas in the Bay of Plenty. The project includes organisations such as ASR Limited, the University of Waikato and NIWA. The project is working towards establishing the productivity and sustainability of aquaculture in the Bay of Plenty. A wave buoy has been deployed to gather data on the wave climate and will remain in place for a number of years. Field surveys from mid 2003 through to 2004 intensively sampled water chemistry, physical parameters and phytoplankton. During the same period a current meter has been used to monitor currents at several locations, including spot measurements at the time of sampling. Temperature sensors were also deployed at a number of locations. Data collection is intended to assist with the development of models by ASR limited to predict productivity and the impact of aquaculture such as mussel farms.

Other aspects of the AMA science project have been a biological and sediment survey of the Bay of Plenty coastal shelf sea floor by ASR limited in conjunction with the University of Waikato. NIWA have been contracted to supply remote sensing data for SST and Chl-a over the period of the study and to provide a synopsis of the climatology. The Chl-a work included a ground truth survey for calibration data to refine case 2 algorithms and processing.

In conjunction with the science project Environment Bay of Plenty has undertaken an analysis of the uses and values of the offshore areas. Data was obtained from various sources (e.g. Coastguard, Ministry of Fisheries) and a number of maps prepared showing Commercial, Recreation and Cultural fishing areas, sites of ecological significance, charter boat routes, whale migration areas, navigational channels etc. All this information is building a picture of the uses of the offshore area so that any planning is carried with a good knowledge base. The maps are currently being printed with a view to gaining public feedback over the next few months. The AMA science project in conjunction with the Offshore Use Project will then provide the basis for changes to the coastal plan to provide for Aquaculture Management Areas in the Bay of Plenty.

Regional Council to Charge Coastal Rates

Environment Bay of Plenty is currently developing a coastal occupation charges regime for the Bay of Plenty. On behalf of the community a "rental" from each occupier of the coast would be collected with revenue being spent on the sustainable management of the coastal marine area. The intention is that those gaining private benefits from the coast compensate the public for losses experienced. Public consultation is expected to be carried out on a draft regime later this year.

Waikato Region

Jenni Fitzgerald, NZCS Waikato Regional Coordinator

Innovative Barging Project Underway

A barging project involving the transport of quarry aggregate from a quarry at Kopu across the Firth of Thames into Auckland has recently begun operation. The project means a potential reduction of 2,200 trucks per year on the road from Thames to Auckland and will allow 200,000 tonnes of material for roads and construction to be brought into Auckland over the next three years. As the barges can hold greater volumes than trucks, only about 100 barges per year are needed to transport the material.

The barging project has come about as a result of a co-ordinated approach between the quarrying company H.G. Leach & Co (who first came up with the idea), Land Transport New Zealand (which is providing funding to get the project up and running), and Environment Waikato (which is monitoring the project outcomes). Land Transport New Zealand agreed to support the project because of its potential in minimising the impact on the nation's roading network by finding suitable alternative means of transporting goods on a case-by-case basis. The investment is up to $289,000 over three years, and the project would

need to be completely commercially viable after that date.

Bigger Flood Risk from Climate Change

Environment Waikato is factoring climate change into its river management planning which is changing as a result of increasing demand for development on flood plains, climate change, increasing community expectations for flood protection and recent flood events, which have highlighted New Zealand's vulnerabilities to flooding. Changes in civil defence management have also led to an all-hazards approach and requirements for a greater co-ordination of risk reduction activities.

Over the next two years central government is reassessing its role in flood risk management to find ways of managing floods better. It will cover whether current flood risk assessment is adequate, future best practice, funding and affordability for poorer communities, legislation on managing flood risk and river control, getting good information on flood risk and the role of local and central government and communities in flood management.

A regional council group is working on a flood management protocol designed to develop better processes for assessing flood risks and selecting mitigation options, understanding natural systems, increasing the level of community awareness and treating residual risks.

A wide range of social, environmental, economic and cultural effects are expected as a result of climate change, including more frequent and intense storm events. The increased frequency of flooding and rainfall events are likely to increase between 5 and 15 percent, and there would be more pressure on existing flood protection schemes. Sea level rise will also increase coastal erosion and flooding, particularly with storm surges, with worse flooding in delta regions of major rivers.

Environment Waikatol is now looking at greater than 100 year events, evaluating one in 500 year events, tsunami and earthquake risks.

If you have any questions about this please contact Brendan Morris (Brendan.Morris@ew.govt.nz).

Managed Retreat

Environment Waikato is embarking on a project to investigate the ins and outs of managed retreat as a viable management tool for responding to coastal erosion hazards. 'Managed Retreat' is often bandied about as the answer to issues of erosion hazards, however, there is little substantive information about how managed retreat could be applied in practice, particularly if there is likely to be a long-term coastal erosion trend.

The focus of this project is to provide an overview of various methods by which managed retreat could be implemented. Options will be analysed using economic and social data to indicate the general circumstances in which they would, or would not be feasible. This will assist in identifying whether Managed Retreat is financially and technically feasible.

If you have any questions about this project please contact either Annabelle Giorgetti (Annabelle.Giorgetti@ew.govt.nz) or Chris Turbott (ChristopherTurbott@aaenvironmental.co.nz).

West Coast Sand Mining

A public meeting was held at the Raglan Town Hall on the evening of the 27 May to discuss the application by offshore companies to investigate sand mining opportunities off the West Coast of the North Island.

Currently one company has gained a permit from Crown Minerals to undertake surveys investigating the possible iron sand resource along the west coast of the North Island, with view to future mining of the resource for export to China. A second company has been refused permits due to a lack of information. The level of public concern and community passion is very evident, and these early applications have initiated the formation of a group called KASM: Kiwis Against Sand Mining.

The meeting was organised by Dr Paul Hutchison, MP for Port Waikato, and a number of guest speakers were invited to provide specialist advice on both the regulatory processes and the environmental impacts of mining activities. Technical experts (Prof. Terry Healy and Dr Shaw Mead) were present to speak about the physical and ecological aspects of the west coast resource and potential impacts of possible mining activities. The lack of information currently available on the west coast was recognised as a barrier to the assessment of environmental effects of the proposed mining. Environment Waikato coastal consents manager Mr Mark Brockelsby was present to discuss the framework under which any company seeking to undertake exploration or mining activities would have to apply for consent. Local speakers Mrs Angeline Greensill and Mrs Sheryl Hart provided comment and inspiration for those in the local community concerned about the potential for an international company to gain rights to exploit resources of the NZ coastline.

Mangrove Steering Group

A Mangrove Steering Group meeting was held in Tauranga on 26 May 2005. The Mangrove Steering Group aims to share scientific information about mangroves. Members of the Steering Group include regional councils, DoC, Mfish, NZ Landcare Trust, Forest and Bird, district councils, research providers, community group representatives, and other interest groups. In the meeting the future of the steering group was discussed, and it was agreed that meetings will be rescheduled to annually. Other agenda items included mangroves in the Firth of Thames, and mangrove management in the Bay of Plenty

Region. The next meeting is due in Hamilton (hosted by Environment Waikato) in August 2006.

Marine Farming Monitoring Data

The results to date from the Wilson Bay environmental monitoring programme were presented to the general public by NIWA and the Group A Marine Farming Consortium in Thames on 12 May. The results show little evidence of impact of farming on the water column, but some evidence of impacts on the sediments and benthic communities in the vicinity of the farm. Marine farming in the Wilson Bay Aquaculture Management Area is managed by Environment Waikato using a framework based on 'limits of acceptable change' (LAC), and a number of the benthic trigger points identified as part of the LAC framework were shown to be exceeded in the latest monitoring report.

Canterbury Region

Justin Cope, NZCS Canterbury Regional Coordinator

Canterbury Coastal Group Seminar 2005

The annual Canterbury Coastal Group Seminar organised by Environment Canterbury was held in Christchurch during March. Hosted every year for the past 14 years, the seminar invites practitioners and students in the Canterbury coastal science and management community to participate in presentations and discussions on topical coastal research and management issues in the Canterbury region. There was another great turnout this year with around 60 participants entertained by a full day of presentations and group discussions.

Dr Maree Hemmingsen from the University of Canterbury presented some of the findings of her recently completed PhD thesis looking at the reduction of sediment on the beaches of the Canterbury Bight and the implications this has for determining sediment budgets on mixed sand and gravel coasts. Dr Deirdre Hart from the Geography Department at the University of Canterbury gave an interactive talk on the aims and structure of the coastal course programme in the Geography.

Neill Price, Chairman of the Te Kohaka o Tuhaitara Trust gave an excellent presentation on the development of the Tuhaitara Coastal Reserves Plan in North Canterbury, Jason Harbrow from the Geography Department at the University of Canterbury outlined his plans for post graduate research into wave runup on the beaches of Christchurch and a group of 300 level Geography students took the runup theme to extremes and asked the question "Is Christchurch Tsunami Proof?"

Joanne Stapleton described some early findings of her Masters research looking at the form and function of the Waihao-Wainono barrier beach and Derek Todd from DTec Consulting and Dr Murray Hicks from NIWA presented some of their investigations into the effects of dams on the Waitaki River on coastal processes and historic shoreline change. Dr Mark Dickson from NIWA carried this theme on and outlined some of the work he intends to undertake to model cliff erosion along the Waitaki Fan.

Jason Roberts from the Christchurch City Council gave a stimulating talk on recent work carried out by Coast Care along the beaches of Christchurch and Jeremy Walsh from NIWA rounded out an excellent day with a demonstration of NIWA's new Beach Profile Analysis Tool (BPAT) software.

Hawkes' Bay Region

Gary Clode, NZCS Canterbury Regional Coordinator

Haumoana Storm Event

On 17th March this year, Hawke's Bay was battered by weather produced by a deep low (cyclone) that tracked down from Gisborne around Mahia Peninsula into Hawke's Bay. This low off the east coast produced high winds, rain and a significant swell up the east coast of central North Island.

Wave buoy data from Port of Napier showed the swell coming from an East to East-North-East direction with an average significant wave height of 3.25 m. Max wave height recoded was 6.56 m at 19:26 on 17th March 2005.

One of the most affected areas was Haumoana, in particular those properties along the seaward side of Clifton Road, affronting the beach. These properties have a long history of coastal inundation.

In Haumoana along Clifton Road, the houses are situated on the beach crest above MHWS. With a 3 m E to ENE swell impacting head-on to the beach at Haumoana, these conditions were such that wave run-up overtopped the beach crest, inundating the residential properties.

Other affected areas included Te Awanga, Ocean Beach and Waimarama. On a final note, a number of properties in Haumoana were and still are up for sale.

Clifton Road, Haumoana on 17th March, 2005

Word from the Chair

It is great to see that *Coastal News* is once again packed with interesting and thought-provoking articles. This newsletter really does provide a great opportunity for the NZCS members to read about what industry people around NZ are involved in and pick up some ideas for their own work. I know the NZCS Management Committee and Coastal News Editor work hard to bring you new and diverse articles and items are always welcome contributions.

As I discussed in the last *Coastal News* the Management Committee has been busy working on a number of projects on behalf of the members, to try and make sure you are getting the best value for your membership. I have touched on a few below but if you have any questions about the work the Management Committee is doing please feel free to contact any of us.

- The organising committee for the NZCS 2005 Conference in Tutukaka, led by Rick Stolwerk, have been really busy preparing for what is going to be an excellent conference with a great mix of exciting speakers, including Bob Dean as a Key Note Speaker, field trips and social activities. You can find more about this on our website. The NZCS Management Committee, on behalf of the members, would really like to extend our thanks to everyone on the conference committee and appreciate all the hard work being put in. We urge you to register early and continue to support the NZCS.
- NZCS now has an Administrator, Hannah Ruffell at Environment Waikato, who is assisting us with all the administration services the NZCS Management Committee and members need help with. Hannah will also be helping to look after new members and liaise with IPENZ over their services to NZCS. I would like to welcome Hannah to NZCS and please feel free to contact her on hannah.ruffell@ew.govt.nz if you need any help. Alex is continuing in the role of Coastal News Editor and I would like to thank her for all the hard work she has put in chasing up articles and organising the newsletter.
- We have analysed the NZCS Member Survey we undertook at the Dunedin conference and this has produced some very interesting results, particularly in the area of regional NZCS events. The report is available in pdf on our website for anyone who has an interest.
- The Management Committee have drafted up a new structure for the Corporate Membership and we are currently talking personally to each of our Corporate members to explain the new proposed structure and to gain their support for the changes that we will be looking to approve at the AGM in October. If you would like more information on this please contact us.
- I will be presenting at the Coasts and Ports 2005 Conference, Adelaide in September and I would strongly recommend support for this conference by the NZCS Members. I have talked before of the reciprocal arrangement NZCS has with our Australian cousins and how we do financially benefit directly from any New Zealand registrations. The Coasts and Ports Conferences held here in New Zealand are extremely important for the ongoing financial stability of NZCS and we hope you will extend your support to this conference in Australia this year.

If you have any comments about the NZCS I would be happy to hear from you directly and am interested in any thoughts from the members. Otherwise I look forward to seeing you all in Tutukaka in October.

Lucy Brake
Chair, New Zealand Coastal Society
lucy.brake@beca.com

NZCS Mission Statement

The New Zealand Coastal Society was inaugurated in 1992 "to promote and advance sustainable management of the coastal environment".

The Society provides a forum for those with a genuine interest in the coastal zone to communicate amongst themselves and with the public. The Society currently incorporates over 300 members.

Members include representatives from a wide range of coastal science, engineering and planning disciplines, and are employed in the engineering industry, local, regional and central government, research centres and universities.

Applications for membership should be sent to NZCS Administrator Hannah Ruffell (e-mail: hannah.ruffell@ew.govt.nz)

I hear and I forget. I see and I understand. I do and I remember.
Confucius

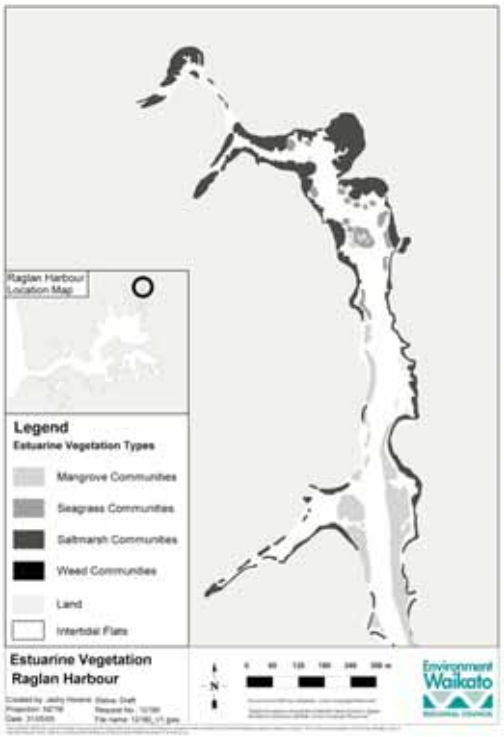
Environment Waikato Maps Vegetation In West Coast Estuaries

Habitat mapping for the larger west coast estuaries of the Waikato region was recently completed by Natural Solutions [1] for Environment Waikato. Environment Waikato maps estuarine vegetation to assess changes in estuarine habitats in the region for state-of-the-environment reporting. Habitat spatial extent and distribution are used as surrogates for measuring changes in biological communities, as habitat types often define the communities present. Knowledge about estuary vegetation distribution is also useful for planning at catchment level, and for the assessment of individual resource consent applications.

The habitat mapping is published as Environment Waikato's Extent of Coastal Habitat Indicator[2]. Indicators are used to assess regional or local performance, and to signal issues to be addressed through policy interventions and other actions. Once baseline mapping is completed (the Firth of Thames is scheduled for 2005/2006), the intention is to document changes in the extent of estuarine habitats over time.

The habitat mapping is carried out using a combination of aerial photography and ground surveys. Baseline information on estuarine vegetation was derived from interpretation of aerial colour photographs (scale of 1:5000 or 1:10,000) flown in 2002, and ground surveys. Aerial photographs of each estuary were mosaiced and vegetation boundaries were drawn on transparent acetate film overlaid over the mosaics. The vegetation boundary lines were ground surveyed to establish their accuracy.

A baseline inventory of estuarine vegetation,



broadly following the national classification system[3] identified the following broad vegetation types in Waikato region estuaries:

1 Mangrove communities (Avicennia marina var. australasica).

2 Seagrass communities (Zostera sp).

3 Saltmarsh communities, within which three sub-communities were identified:

— The 'Rush community' (includes, for example, species such as Leptocarpus similis [golden jointed rush], Juncus maritimus var. australiensis [sea rush]);

— The 'Marsh Ribbonwood community' (includes, for example, species such as Plagianthus divaricatus [marsh ribbonwood], Samolus repens [sea primrose], Silliera radicans [remuremu], Stipa stipoides [silver tussock grass]).

— The 'Salt Meadow community' (includes, for example, species such as Samolus repens [sea primrose], Selliera radicans [remuremu], Sarcocornia quinqueflora [glasswort], Cotula coronopifolia [Bachelor's button], Eleocharis actuta [sharp spike-sedge], Isolepis cernua [slender clubrush], Triglochin striata [arrow grass]).

4 Weed communities (e.g., Paspalum vaginatum, Spartina sp.).

Traced vegetation boundaries were converted to digitised images that were imported into Geomedia GIS software. The mapped vegetation

was registered to the New Zealand Map Grid by overlaying the vegetation and harbour boundaries over the 'Waikato Regional Aerial Photography Syndicate (WRAPS) 2002'. Known points, such as corners of houses were used to adjust the positions of the unreferenced data.

The completion of habitat mapping within the west coast estuaries means that Environment Waikato now has baseline habitat maps for eight estuaries on the Coromandel peninsula, and four on the west coast of the Waikato region. The next step will be to map the Firth of Thames. Once baseline maps have been created, habitat mapping will continue every five years, to update on any changes in vegetation distribution.

For further information, contact Malene Felsing, Environment Waikato (malene.felsing@ew.govt.nz), or visit www.ew.govt.nz.

References

1 www.ecologist.co.nz/index.htm

2 www.ew.govt.nz/enviroinfo/indicators/index.htm

3 Ward, J C and Lambie, J S, 1999. *Monitoring Changes in Wetland Extent: an Environmental Performance Indicator for Wetlands*. Coordinated Monitoring of New Zealand Wetlands. A Ministry for the Environment SMF Project. Lincoln Environmental, Lincoln University, Canterbury.

Profile: Kath Coombes

NZCS Committee Member

Kath Coombes joined the NZCS committee in October 2004 and is part of the team organising the annual conference in Tutukaka in October 2005.

Kath is a coastal project leader with the Auckland Regional Council. This position involves managing a range of coastal planning, policy and research projects. Key projects include developing 'coastal compartment plans' in partnership with city and district councils. These plans aim to manage issues such as mangrove expansion and coastal erosion in ways that address community concerns and integrate coastal management across MHWS. Kath also contributes to the work of the Hauraki Gulf Forum and processes coastal permit applications.

Prior to joining the ARC in March 2004, Kath was an environmental policy advisor at North Shore City Council for 4 years where her focus was on coastal, hazards and stormwater issues. Major projects included a district plan variation which changed the provisions for coastal setbacks and esplanade reserves. While working at NSCC, Kath completed a Masters in Environmental and Resource Planning from Massey University. She had previously graduated with a MSc in Geography from Otago University. Before joining North Shore City, Kath worked for the ARC Parks Department and the Wellington Regional Council. Kath is originally from Nelson and is keen on sea kayaking, tramping and mountain biking.

Kath can be contacted at: kath.coombes@arc.govt.nz.

NZCS Management Committee

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Deputy Chairperson/ Membership Coordinator	David Phizacklea (davidp@tauranga.govt.nz)
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For any enquiries regarding Coastal News articles or advertising please contact **NZCS Editor** Alex Eagles (penguins@clear.net.nz).

A Different Approach to Coastal Strategy Consultation

The New Plymouth District Coastal Strategy Project Team (Project Team) has recently completed their first round of community consultation to develop the New Plymouth Coastal Strategy (Strategy) through a series of busy and interesting workshops and presentations. The project team is made up of New Plymouth District Council's (NPDC) staff/managers members from a range of areas including recreation, assets, resource consents, and Beca Carter Hollings & Ferner (Beca) Specialists.

The strategy is a Beca-led NPDC initiative to address development pressures along New Plymouth's Coast line. The 20-year strategy will provide guidance on land use, planning, resource management, recreation and reserves planning, infrastructure and asset management, and economic development for the entire New Plymouth coastline.

Successful community and key stakeholder consultation is fundamental in developing a robust and user-friendly strategy. The strategy will be based on district wide and local community identified visions (where we want to be) and challenges/goals (what we want to achieve), which was the focus of the first round of consultation. Intimate and functional workshops were held between 15th-23 March 2005 in 5 different locations including Tongaporutu, Oakura, New Plymouth, Waitrara and Urenui. The workshops involved an overview of the strategy process and round table discussions and brainstorming of the district and local areas visions and issues. Common issues raised included erosion, development location and pressure, access to the beach and protecting the existing feel of the place.

A different approach to strategy consultation, which proved extremely popular, was to hold a 'Coastal Forum' (forum) for heads/representatives of organisations. This meeting and workshop was attended by approximately 92 people and was held on Wednesday 16 March 2005.

The aim of the forum was to provide an opportunity for key stakeholders to become familiar with the project, to be introduced to strategic coastal planning, and also to be involved in an initial discussion on coastal management in the New Plymouth district. Key presenters spoke about the following Long Term Community Plan topics:

- Prosperous/Skilled;
- Vibrant/Connected;
- Together/Sustainable; and
- Healthy and Secure.

Organisations represented at the presentation included Taranaki Chamber of Commerce, Taranaki Caravan Club, Fitzroy Surf Lifesaving,

New Plymouth Yacht Club, Safer Community Council, Western Institute of Technology at Taranaki, Westgate Transport Ltd, Ngamotu Marine Reserve Society, McKinley & Co Surveyors, Surf Life Saving Taranaki, Oakura Boardriders Club, Shell Todd Oil Services, Federated Farmers, NGC NZ Ltd, Shane Arden MP, and New Plymouth Airport Authority.

Along with community and key stakeholder consultation, it was considered essential to have tangata whenua input into the strategy as well. In order to establish a suitable way of consulting with local iwi and hapu, a made-to-measure consultation approach was applied.

Several meetings were organised and held with tangata whenua representatives from New Plymouth district coastal areas. After three meetings (one informal) it was decided that these representatives would work together as a group and the Mana Whenua Reference Group (MWRG) was created. This group is made up of 12 iwi and hapu representatives, including:

- Ngati Tama;
- Te Atiawa Otaraua;
- Otaraua Hapu Trust;
- Otaraua Management Committee;
- Ngati Mutunga;
- Nga Mahanga;
- Pukeangiora Hapu;
- Puketapu Hapu;
- Ngati Rahiri Hapu;
- Ngati Te Whiti Hapu Society Inc;
- Ngati Te Whiti Ahi Kaa;
- Ngati Tairi; and
- Ngati Maru.

The MWRG latest meeting involved a workshop to discuss current situation of the district's coastal areas, the history and stories behind where we've come from, coastal issues/challenges and goals. The group are now working on a background paper, which encompasses this information.

The MWRG have an integral part in determining appropriate forms of tangata whenua consultation. In response to a MWRG request, a district wide hui for all tangata whenua was held on 20 April 2005 at Murupara Muru Ruapatu Marae. Approximately 40 people with a mixture of interest areas attended. Coastal issues of particular concern (but not exclusive to) to tangata whenua included: the preservation of vegetation; water quality; development in appropriate places; protection and identification (where appropriate) of waahi tapu sites; and protection of sand dunes against extraction.

Meeting with the community in an intimate manner, holding a coastal forum for businesses and organisations and letting tangata whenua decide on an appropriate way to consult, have all been different and (to date) successful means of strategy consultation.

The first round of consultation has set a path for the strategy to develop with input from the community, tangata whenua and the MWRG. The outcomes of the first round of consultation are being collated, summarised and reported back during the second round of consultation. We look forward to developing the outcomes of further discussions and workshops in the second round of consultation, which is scheduled for July 2005.

Namouta Poutasi
namouta.poutasi@beca.com

NZCS Regional Coordinators

Every region in the country has a NZCS Regional Coordinator who is available to help you with any queries about NZCS activities or coastal issues in your local area.

North Island		
Northland	André Labonté	labonte@xtra.co.nz
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Otago	Mike Hilton	mjh@geography.otago.ac.nz
	Paul Pope	poppa185@student.otago.ac.nz or popey@xtra.co.nz
Southland	Ken Murray	kmurray@doc.govt.nz

Profile: Aileen Lawrie

NZCS Bay of Plenty Regional Co-ordinator

Aileen Lawrie has worked as a Senior Environmental Planner - Coastal at Environment Bay of Plenty for the past four years. At the moment, her main role is as project manager for the Regional Coastal Environment Plan. She also coordinates coastal interests within the Regional Council.

Other current projects include aquaculture planning, an integrated management review of Tauranga Harbour, and background work on developing a recommendation on coastal occupation charges.

Aileen graduated from Canterbury University with a Masters degree (with Distinction) in 1993. She then spent two years at Environment Canterbury as a Consents Officer.

Before making the leap to Planning, Aileen worked for six years as a Consents Officer with Environment Bay of Plenty, specialising in coastal permits.

Highlights of this time include successful Environment Court cases for sand mining at Otamarakau, harbour dredging for Whakatane and a High Court case involving the artificial surfing reef at Mount Maunganui.

When not working, Aileen can often be found at Ohope beach with her two sons and occasionally playing with the local brass band.

Missed an article in *Coastal News*? Back issues (from Number 6 in April 1996) are available as pdf downloads from www.coastalsociety.org.nz - follow the Publications link on the front page.

Conferences and Workshops

NZCS Conference

October 12-15 2005, Tutukaka, NZ

Coastal Problems? Innovative Solutions.

The 2005 New Zealand Coastal Society Conference is being held in Tutukaka at the Oceans Hotel and the Whangarei Deep Sea Anglers Club.

The programme will include...

- 12 October, 5.30pm to 7.30pm - Social Function to welcome delegates, Oceans Hotel;
- 13/14 October - NZCS Conference with local and regional field trips;
- 15 October - Trip to the Poor Knights.

Topics will include "how to do it' papers with a teaching/training focus as well as those that are informative and present innovative solutions to coastal problems on: allocation of space in the coastal zone; aquaculture; the planning environment:coastal zone vs coastal marine area; boundary; ability to rationalise mooring allocation; sand extraction; land development near the coast; and hard vs soft structures for coastal protection.

For further information please contact:

2005 NZCS Conference Convener
Rick Stolwerk
Northland Polytechnic
Phone/Fax (09)432 0741
email:stolwerk@xtra.co.nz

Coasts and Ports Conference

September 20-23, 2005, Adelaide, Australia

Australia's 2005 conference on coastal and ocean engineering include themes on:

Coastal processes - modelling, prediction and management; coastal planning and policy; Catchment to coast; local government and the coast; aquaculture engineering, policy and planning; port infrastructure and its accommodation within urbanised coastal areas; maximising port efficiency by coordinating diverse business needs; managing the needs of society, the environment and industry; and innovation in coastal, ocean and port engineering.

For further information visit: www.plevin.com.au/coastsandports2005 or e-mail coastsandports2005@plevin.com.au.

International Marine Protected Areas Congress

23-27 October, 2005, Geelong, Victoria, Australia.

The IMPAC congress will encompass research, planning, management and conservation of MPA from inshore areas to deep seas.

For more information visit www.impacongress.org or contact John Senior jsenior@parks.vic.gov.au.

Canadian Coastal Conference

6-9 November, 2005, Dartmouth, Nova Scotia, Canada.

Topics of the 2005 CCC include: numerical and physical modelling; development and application of coastal GIS; acquisition, analysis and interpretation of coastal data; ice impacts on shorelines; instrumentation and methods; design of shore protection; innovative practices in engineering and shoreline management; and impacts and adaptation to climate change.

For information, access www.ccc2005-ccl2005.ca.

Seachange 05: Managing Our Oceans and Coastal Waters

November 21-22, 2005, Auckland, NZ

The Environmental Defence Society (EDS) is hosting Seachange 05 at the Heritage Hotel.

Seachange 05 will evaluate recent national policy developments affecting the management of NZ's coastal and marine areas as well as learn from innovative regional and local responses to coastal management issues. Topics to be covered include managing the impacts of coastal development, marine activities and climate change, the protection of marine biodiversity and resolving conflicts over the use of marine resources.

A draft programme and more information is available at www.seachange05.com.

First International Conference on the Application of Physical Modelling to Port and Coastal Protection – CoastLab06

May 2-4, 2006, Faculty of Engineering of the University of Porto, Portugal.

Practical papers detailing the design, construction, instrumentation and results of model tests, as well as theory, measurement, analysis and modelling for the following topics are encouraged: waves: generation, theories, prediction; structures: types, interactions and structural responses; measuring Techniques: pressures, velocities, forces; erosion: assessment, control; scale effects: control, techniques; natural hazards assessment.

Abstracts should be e-mailed as a word-file attachment to fpinto@fe.up.pt by October 15, 2005.

For further information visit: www.fe.up.pt/~lpneves/coastlab06.

Coastal Sediments 07

May 2007, New Orleans, USA

The Coasts, Oceans, Ports, and Rivers Institute (COPRI) of the American Society of Civil Engineers conferences provide an international forum for exchange of information among coastal engineers, geologists, marine scientists, shallow-water oceanographers, and others interested in the physical processes of coastal sediment transport and morphology change.

For further information visit: :www.asce.org/conferences/cs07/index.cfm

Vehicles on Beaches

There is no doubt that traffic, be it pedestrian, equestrian or vehicular, is damaging to fragile dunes. Similarly, effects of traffic on seabirds (in particular those nesting on the beach) is documented. The jury seems to be out, however, about whether vehicles operated responsibly and with due care for the environment are bad news for beaches. For example, there appears to be little conclusive data relating to effects of vehicles on shellfish.

There is also no doubt that there are social considerations including nuisance, and health and safety aspects. There are conflicting expectations within the community – that one is able to take one's vehicle on the beach; and that one is able to use and enjoy a day at the beach, safe from nuisance and threat of vehicles.

The bottom-line question is whether vehicle use is appropriate in coastal areas. The difficulty arises in determining appropriateness. We are charged under the Resource Management Act (RMA) to balance the contribution that vehicle use has on one sector of the community's well-being on the one hand; with the detriment it has to another sector on the other hand. And, in enabling this 'pursuit of happiness', we must ensure that any adverse effects on the environment are avoided, remedied or mitigated.

There are a number of factors that combine to make this a complex issue. These include the overlapping jurisdictions of multiple management agencies which may include regional councils, territorial authorities, NZ Police and the Department of Conservation, and the lack of coherence between existing regulatory regimes. There is also confusion about the status of beaches as public roads and how this interrelates with resource management regimes.

A complicating factor is the presumption in the RMA against regulating for a particular use or a particular sector of the community. For example, a common complaint relating to vehicles on beaches is that it's the "outsiders" that cause all the problems, not the locals, however a restriction based on this would not be valid. Similarly it is not defensible to allow fishermen (for example) to take their vehicles on the beach but not allow driving as a recreational activity in its own right. It would be problematic to say that one activity is more valid or has less of an effect on the environment than another. Any new restrictions or enforcement will need to be across the board and will therefore have implications in terms of public/political support.

Enforcement poses a particular issue with agencies often not having on the ground representation, or the appropriate representation at any given time. This is compounded by the general lack of awareness and misunderstanding of existing regulations as well as the conflicting nature of available information.

Problematically, vehicle use is incompatible with so many other uses, especially passive uses which derive value from the natural environment.

Many agencies around the country are grappling with how to appropriately, efficiently and practically deal with this issue and it seems the pressure is increasing. Environment Waikato hosted a workshop on this topic in February which raised as many questions as it answered and work continues.

The only thing we know for sure is that this is an issue that is not going to go away. We need a management regime that is consistently and correctly understood and conveyed; that is practical, enforceable and accepted within each community.

For more information contact Jenni Fitzgerald, Jennifer.Fitzgerald@ew.govt.nz.

Photos courtesy of Greg Lowe, Franklin District Council

News from the UK

While in the UK, I worked for Royal Haskoning, a Dutch-owned international consultancy, who were involved in Environmental Science, Planning, Engineering and Architecture. I worked in the Coastal and Rivers Division in the head UK office in Peterborough, Cambridgeshire.

Some of the work I was involved in was related to the early stages of environmental impact assessments for offshore wind farm developments. As part of the Renewables Obligation (part of the Utilities Act (2000)), the UK Government has a commitment to produce 10% of it's power by renewable sources by 2010 (and 15% by 2015).

The UK has the largest offshore wind resource in Europe, and offshore wind energy is expected to be a major contributor towards this target. In 2001, the Crown Estate (CE) undertook a process by which 18 companies were awarded agreements for leases in the first round of offshore wind farm sites on the UK sea bed.

These companies were given a three year period in which to obtain the necessary consents for a lease to be granted by the CE.

Restrictions were placed on the nature of the proposed sites, including distance from shore, distance from other wind farms, generating capacity and number of turbines.

Sites were also assessed in terms of proximity to shipping lanes, dredging areas, fisheries, conservation areas, cables and pipelines, as well as physical and geological suitability. Two large scale offshore wind farms from this first round are operational in the UK, and a number of projects have planning consent and are being built.

Resistance to wind farm developments has come particularly from the fishing industry and environmental groups concerned about the impact of the turbines on bird life.

A second round of wind farms in three strategic areas (Thames Estuary, Greater Wash and the North West) are waiting for applications.

The second round of wind farms are larger, but placed further offshore (minimum 8 km from the coast), to reduce the visual impact and avoid sensitive shallow water bird feeding areas. In total, the British Wind Energy Association projects that offshore wind will contribute 4% to the government's 2010 target.

The UK's approach to managing rapid development of offshore wind farms is interesting in light of potential future pressures in NZ, given current pressure on existing forms of power generation. However, both the preparation of policy and/or assessment of such applications in New Zealand could be particularly difficult due to the relative paucity of environmental information, particularly offshore from the West Coast.

Further information is available from the website for the offshore wind farm industry in the UK at www.offshorewindfarms.co.uk. The RSPB website has information on their concerns about wind farms, including round two of the offshore proposals, at www.rspb.org.uk/policy/windfarms.

Bronwyn Gibberd
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2005 NEW ZEALAND COASTAL SOCIETY CONFERENCE

12th to the 15th OCTOBER

The 2005 New Zealand Coastal Society Conference is being held in Tutukaka at the Oceans Hotel.

Coastal Problems? **Innovative Solutions.**

PROGRAMME

Wednesday 12th October
10.00am - 4.30pm: Vehicles on beaches workshop
- sponsored and run by the Northland Regional Council
Location: Waikato Room, Oceans Hotel TUTUKAKA
7.00pm - 9.00pm: Welcome and Registration for Coastal Society Conference. Location: Main Reception
7.00pm - 8.00pm: Introduction to Northland Coasts/Sand dunes/Compliance by Lisa Forrester, Ross Atkinson DOC
Thursday 13th October
NZCS Conference and local field trip to Matapouri Bay
6.00pm: NZ Coastal Society AGM
Friday 14th October
NZCS Conference and regional field trip to Bream Bay
Saturday 15th October - Optional trip to Poor Knights Islands

KEYNOTE SPEAKER

Robert G. Dean

DINNER SPEAKER

Wade Doak

CALL FOR POSTERS

Deadline: 31st August

REGISTRATIONS

Registrations Open ..... **1st July**
- advertised by email and mail out of registration brochure

Early registration deadline ..... **26th August**

Vaughan Cooper - Resource Policy Team Leader
Northland Regional Council, Private Bag 9021, Whangarei - 0800 002 004

FRIDAY FIELD TRIP OPTIONS

Travel by boat from Tutukaka Harbour to Marsden Point Wharf: visit Marsden Cove Hoppers development and NIWA.

Following this there are two choices:

- Waipu Cove and Mangawhai;
- Northland Port Company.

Main Sponsor:

WHANGAREI DISTRICT COUNCIL

Host:

NORTHLAND REGIONAL COUNCIL

For further information please contact:

2005 NZCS Conference Convenor
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