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The WOW Factor: To find and implement solutions for serious erosion at Haumoana, Te Awanga and Clifton and unite the Cape Coast community to beautify, protect and promote the coastline as an asset for the wider Hawke's Bay region.

Protecting our beaches

Groynes keep gravel where it belongs

The Tukituki Groyne provides proof that groynes can successfully stabilise the beach and protect the coast. Lets finish the job.

WOW has commissioned one of New Zealand's top coastal engineers, Steve Moynihan of Moynihan Coastal Consultants, to provide an independent and qualified analysis of coastal erosion and protection at Haumoana. Here's a brief summary of his interim report prepared by the WOW technical committee.



Steve Moynihan

Monitoring at 12 locations along the coast shows that north of Awatoto the beaches are slowly accreting or gaining in size. South of Awatoto the reverse is taking place; wave erosion is bringing the sea inland at a rate of up to one metre a year. Some properties are impacted more than others; the 21 houses along Clifton Road in Haumoana are continually losing land in the flow to the north and others will be threatened over time.

Coastal engineer Steve Moynihan says a set of five groynes, ranging in length seawards from 20 metres to 2.5 metres between the Clifton Rd-East Rd corner and the existing Tukituki groyne, would be sufficient to stabilise some 2100 metres of coastline. The northernmost groyne would simply be a strongpoint to anchor the series further south.

Issues with equilibrium

The two prime causes of erosion are wave energy which pushes sand and shingle in a net northwards direction, and shingle 'supply and extraction'. Both of these combine to influence the shape of the coastline which actively seeks to find its natural 'dynamic equilibrium'.

CAPE COAST PROTECTION:
Proposed groyne field for Haumoana



In engineering terms this natural shape is described as the 'Crenulate shape' and this used in determining the design of groynes and to predict their likely downstream impact.

When the main wave action is at an angle to the shoreline, the waves will continue to move shingle in that direction and this contributes to erosion. If waves approach the shoreline straight-on or directly, there is no 'alongshore' energy component or shingle movement.

Moynihan says the coastline south of Awatoto would at one time have existed in dynamic equilibrium, with shingle moved by the sea effectively replaced by large quantities of shingle brought down by the rivers and from natural erosion from the cliffs to Cape Kidnappers.

The 1931 earthquake and tectonic movement has altered the gradients of the rivers. Now more gravel is deposited in the riverbeds and less is carried to the beaches. Engineers now estimate that the average volume of gravel now supplied to the coast by the Tukituki is 13,000m³. The other source of gravel, from the cliffs to Cape Kidnappers, is estimated to supply 18,000 cm³ annually.

Winstones Aggregates has a Resource Consent to take 30,000 m³ of gravel until 2014. This permits them to remove approximately the same amount of shingle that is naturally supplied to the coast.

Evaluating Evacuation

WOW weighs fight or flight

After years of protracted debate about whether the coastline should be protected by physical structures or residents evacuated, WOW has been challenged to prove it's hard engineering option is a better solution for the Cape Coast community than 'managed retreat'.

Until the joint council committee meeting in August, all that was left on the table was 'managed retreat' but WOW's proposal for five groynes as the first stage of a coastal protection plan is to be given an equal chance.

WOW must first make a fair evaluation of 'managed retreat' so it can be proved in the Resource Consent process, that its option is the best way forward for Haumoana, Te Awanga and Clifton.

First line of defence

While those who live one, two or three streets back from the beach might wonder why they should be concerned, the reality is once the first line of houses goes it's all downhill from there.

Move the 21 most at-risk homes then the power pole providing electricity to the rest of the coast is gone, the ocean is lapping at the door of the Cape View shops; Four Square, Gannets Bar and the Cape View Takeaways.

Of course that directly impacts on access to the rest of the coast, and while there is a paper road through the back that can be developed, it still may be less invasive and more cost effective to protect the existing access.

Some critics are too handy with the Cullen catchphrase, "rich pricks" or "if the sea is rising, why build there in the first place?"

Editorial

WOW option now official Important to stay focused

The Walking on Water (WOW) proposal to protect Haumoana, Te Awanga and Clifton from erosion and inundation is being embraced as one of two options by local councils under pressure to decide on the future of at-risk Cape Coast properties.

WOW's written and verbal submissions to the Hawke's Bay Regional Council (HBRC) and the Hastings District Council (HDC) have now been advanced to the next stage.

At the conclusion of the day long Haumoana/Te Awanga Consultation Joint Committee Workshop on Thursday 13 August 2009, WOW was told its hard engineering proposal would be considered alongside managed retreat.

During the closed door session executives of HDC and HBRC, along with their senior engineering, administrative and legal advisors agreed their initial proposal for 13 groynes at a cost of \$18 million, 90 percent funded by the Cape Coast community, was now off the table.

The committee agreed to issue an apology to the Cape Coast community for having made it appear that this was a serious option, when it was known that it would never be affordable. (\$18.5m groyne plan scrapped, *Dominion Post* 18-08-2008)

WOW put its case for stage one of its proposal; a seawall around the 21 at-risk properties at East Rd-Clifton Rd corner and five groynes positioned northward to the existing Tukituki groyne.

Agreement essential

The success of this proposal now rests on the ability of HBRC coastal engineer Richard Rien-Hamil of Tonkin and Taylor and Steve Moynihan of Moynihan Coastal Consultants, acting for WOW, agreeing on a way forward.

The two top coastal engineers will work together on a computerised model to map out the best possible solution for construction and placement of the five groynes. They will also need to show minimal negative downstream effects. Those discussions are currently underway.

As part of the agreement to work with the council's, WOW has been told it must give serious consideration to the 'managed retreat' option in order to prove its hard engineering approach is the 'best practicable' solution. The councils have suggested that around 100 homes will need to be moved out of the hazard zone area, an option WOW had rejected at its two public meetings.

As part of the new deal WOW is currently working with both councils to determine the true cost of retreat including the social and economic and community impacts.

WOW has now been given a unique opportunity to work with the Joint Committee to take its proposal for protecting the coastline to a stage where it can go through the resource consent process.

WOW paying its way

Currently the Joint Committee is keen to see further development on stage one and two of the proposal WOW has been working on with its coastal engineer Steve Moynihan for the past three months.

WOW will cover the costs of Moynihan Consultants with the ultimate goal of reaching a solution that works for all parties concerned. Once a workable model is arrived at, the engineers will be asked to look at extending the model from East Rd corner along the rest of the coastline to protect the 55 'at-risk' properties at Te Awanga and other scheduled in the coastal hazard zone scheduled for removal by the councils.

The ideal outcome is that the coastline will be protected from further erosion and the build up of gravel behind each groyne will restore and replenish the beach areas.

It's easy to come up with ideas, but taking them the next stage to where they are accepted by a wider community and then by the local authorities who make the initial decisions is a massively time consuming undertaking.

The next step, particularly when dealing with issues of coastal erosion and hard engineering, is daunting to say the least. WOW is continuing to work toward ensuring its community-driven proposal complies with the complex central government processes of the Resource Management Act and the New Zealand Coastal Policy Statement.

While there is support in the community for artificial reefs, soft engineering and replenishment to help protect the coastline —and WOW agrees there's merit in all of those — the reality is we need to stay focused. If we do the hard engineering with the groynes then we can look more closely as reefs, and in particular coastal beautification including walls and pathways, with the knowledge that these efforts will no longer be washed away in the next big storm.

If the engineers can't agree on the way forward or the Joint Committee is given reason to believe the community is not behind the WOW proposal it will simply revert to pursuing 'managed retreat'.

In the meantime the WOW committee is working overtime on fundraising to cover the costs of its coastal engineer, as well as fact finding and information gathering to ensure its proposal stacks up for the next Joint Committee meeting later this year.

— Keith Newman, WOW editor

The WOW Committee

- Ann Redstone** Chairperson, convener
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Peter Larsen technical team leader
Rex Read distribution, and secretarial
Margaret Read secretary and treasurer
Margot Macphail graphic designer
Dick Frizzell artist and friend of the coast
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Linda Ward database, friend of the coast
Jack Hughes scientist, friend of the coast
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WOW Profiles: The technical team

Peter Larsen Saving energy and the coast

Valuable members of the WOW committee are Peter Larsen and Jack Hughes, local residents who have taken on complex tasks that require an

understanding of engineering, coastal processes and the ability to work closely with our coastal engineer.

Peter Larsen's field of expertise is in Power Engineering Generation planning. After working with the New Zealand Electricity Department in Hawke's Bay he spent five years with Southern California Edison during the oil crisis and the 'acceptance of renewables'.

After a spell in Jakarta, Indonesia with Beca Worley International he returned as engineering manager for Electropower in Palmerston North. He later formed EnergyFocus and now operates as an energy broker from his home in Haumoana, assisting clients with their gas and electricity supply contracts.

While in California, Peter and his wife Brigid, often dreamed of settling by the beach



continued over page

and were happy to find a home/back in Haumoana. After years of renovations, they finally pulled it down and rebuilt and have now lived at the same address for 25 years.

"The coast is a magnet for so many different people. We love the moon on the water, the morning mist on the sea, the sunrises, the Orcas and dolphins swimming by, the gannets diving, the baby seal we found on the beach, fishing and endless walks."

He says the Cape Coast is a wonderful place to raise children with great neighbours and "countless rides to the cape with our son in our blue go-cart buggy". There's always a risk though when you decide to take these adventures in the middle of the night and get caught in a rainstorm and nearly miss the tides.

Even if you do get caught, he says, there are always locals willing to tow you out of trouble or help with the breakdowns. "It's sad to see our walking paths along the beach disappear over the years and the impact of erosion on so many residents.

WOW is a great vehicle to highlight our coastal concerns. As they say time and tide wait for no man, we must act now."

Jack Hughes Down to earth scientist

Jack Hughes is a Hawkes Bay lad, who grew up on a family orchard in Longlands. He studied horticulture at Lincoln College and at Oregon and Cornell universities before working at DSIR and HortResearch. Today he's managing director of Fruition, providing consultancy and technical services to the fruit industry across Hawke's Bay.

"We moved to Haumoana seven years ago and love living here; the people are genuine and creative and the beach is rugged and beautiful beach. Although our kids have now left home they always enjoy coming back here."

Jack's wife Carol is the Education Officer at the Aquarium and the couple have a strong interest in protecting the coastal environment. "The WOW group has given us the vision and confidence to do something about protecting the Cape Coast and I'm happy to contribute my bit."



Gravel grabbing groyne gains girth

Locals will be glad to know the Haumoana groyne at the Tukituki River mouth has had a major makeover, only weeks after grumblings in the media that it was no longer grabbing gravel.

The issue was highlighted when a number of the lighter akmons were seen dancing around in successive high seas before toppling into the ocean, and there was talk about whether the groyne was being properly maintained.

Hawke's Bay Regional Council assets manager Mike Adye insisted that groyne was still doing what is was placed there for, protecting council assets, particularly the Haumoana Domain and the floodgates.

WOW rang the council and was informed the groyne had in fact lost about a metre in height and akmons were being stored up to do that job in the foreseeable future. Then WOW got an email from Adye confirming about 40 akmon units of about 8 tonne each, constructed as part of the 2008 maintenance programme, were on the way once a 40 tonne digger arrived.

Adye says the HBRC has an \$8000 a year budget to maintain the groyne, some years it's spend on manufacturing units or collecting rock and other years on placement. "We regularly go out to the groyne to check it, and maintenance will often depend on how many storm events there have been."

He says on moving the top layer of rock the council was satisfied the bulk of the groyne, including the the limestone rock at the centre, was still firmly in place. "Inevitably there is some settlement and we do expect the sea to move the smaller and even the larger akmons from time to time. It's a highly abrasive environment."

He says rather than a fault, the centre of the groyne is meant to be low so gravel has two ways to pass through, round the tip and across the middle.

The main function of the groyne is for protection of the beach crest on the south side. Across at East Clive three other groynes are in place "to maintain the integrity of the beach crest there and as first line of protection for the sea exclusion bank" around the sewage works.

Adye says the three East Clive groynes have been there for 20 years and were rebuilt completely last year as they were "straight across the beach".

The recent maintenance of the Tukituki groyne say an immediate build up of shingle on the south side, clearly showing that groynes have a marked effect on rebuilding beaches.



GRAVEL GRABBER: From left to right, WOW technical team member Jack Hughes, HBRC asset manager Mike Adye, WOW spokesperson Keith Newman and technical leader Peter Larsen at the recently replenished Haumoana groyne. Photo: Owen Mulliss



GROYNE WORKS: Within days of work being completed the southern side was building up a huge amount of gravel again.

\$18.5m groyne plan scrapped

An \$18.5 million coastal protection scheme for Hawke's Bay's erosion-prone coastline has been ditched because of its cost. The scheme, proposed in a report commissioned by Hastings District Council and Hawke's Bay Regional Council, involved 13 groynes to alleviate erosion at the settlements of Haumoana, Te Awanga and Clifton....

... At a meeting between the councils and residents last week, it was agreed to scrap the scheme and to get coastal engineers from either side of the debate to meet and, if possible, arrive at an agreed solution....Hastings Mayor

Lawrence Yule said resource consent for the groynes would be required regardless of what the scientists decided. "There's no chance of getting it through the consenting process if the engineers disagree, as they do currently. If they can't agree, we're no better off. If they do agree, then it might have some legs," he said.

- Marty Sharpe, The Dominion Post, 18 August 2009

Clock ticking on coastal protection

Around 100 properties along the Haumoana, Te Awanga and Clifton waterfront face imminent immediate threat of damage or destruction in the next series of violent north or south easterly storms.

The erosion problems of the Cape Coast were dramatically accelerated after the 1931 earthquake when the area dropped around 0.75 metre giving ocean currents an unhealthy appetite for our shoreline as they drag our gravel northwards, faster than it can be naturally replenished.

The north facing cliffs of Cape Kidnapper's have retreated in many places, some areas of reclaimed land have gone back to the sea and wild seas continue to chip away at Clifton Beach with quite dramatic losses in recent years.

WOW has made a crude beginning at trying to understand the long term process and efforts to protect the coast by compiling this timeline of events, which it is keen to expand on as new and old data comes to hand.

Properties in coastal hazard zones will be destroyed, unless communities can find a cost-effective means of preventing beach erosion and inundation over the long-term.

<http://www.hbemergency.govt.nz>

Event Horizon

1831: Hawke's Bay earthquake. Huge devastation across the region including tilting the tectonic plate along the Cape Coast causing it to rise at Napier and drop 0.75 metre at Cape Coast. River gradients also impacted.

Around 1836: Biggest sea inundation yet with Haumoana completely under water and the first concrete retaining walls placed along the beach front which are now buried under shingle.



The beachfront at Te Awanga was considerably wider in March 1967 than it is today. This area is now mostly underwater. (Photo Neville Bawden)

1970s:

1973 - 1974: Te Awanga residents used tractor and fencepost boring equipment to place hundreds of steel railway irons topped with a thousand tyres and strapped in with steel rope to protect shoreline and coast from further erosion. This was before resource consent was required. Today resource consent would be required to remove them.

17-19 August 1974: Several storm events, seawater floods 300 hectares of horticultural and urban land in East Clive. Clive, Haumoana and Te Awanga areas; 30 homes evacuated.

1976-77: A sea wall (aka sea exclusion bank) was built but the beach continued to recede. Erosion accelerated by the construction of the Hastings sewer outfall in East Clive.

1978: Three groynes built at East Clive prevent some northern



Haumoana Motors underwater in the June 1974 flood. (Photo Neville Bawden)

drift.

1980s:

1982: Erosion substantially decreases the ponding area between the beach berm and the sea wall which was overtopped twice.

1985: Sea wall was moved further inland and two pumping stations established. The shoreline continued to recede.

1990s:

1987 - 1997: The beach crest suffered a dramatic loss of volume and a retreat inland of 25 metres.

1990s: At Clifton Beach the shoreline retreat is considered to be an average 0.75m per year; Haumoana and Te Awanga 0.30m-0.70m per year.

1998 (what month?): High seas flooded the Haumoana domain and closed the road.

13 July 1998: Community meeting "strongly supports" proposal

for three groynes to reverse the erosion of the beach in front of the Haumoana Domain, and prevent flooding.

8 October 1998: Resource management consent 'conditionally' granted for five years for a groyne 'up to 70 metres long and 18 metres wide' adjacent to the stop bank on the southern side of the Tukituki River. Consent would only be extended if it was proven to be successful.

November 1998: The application for two further groynes, 200 and 400 metres apart and south of the first groyne to help build up shingle on Haumoana Beach and counter erosion, was withdrawn. No explanation given; thought to be budgetary.

February 1999: Construction began on the first groyne at a cost of \$200,000.

2000 onward:

Prior to April 2002 the beach along the coast at Haumoana was covered in shrubs, toitoi, pine, macrocarpa, ngaio, lupins, asters in abundance. There were several walkways meandering through the vegetation. The beach crest was strong and stable.

3 - 4 April 2002: About 20 Haumoana residents were forced to leave their homes as high seas threatened a dozen properties near the corner of East and Clifton Roads and waves overtopped the gravel barrier along other parts of the coast.

22 April 2002: Haumoana residents attend a public meeting to air their concerns about coastal erosions. The idea of a field of groynes 400 metres apart is floated and there is a request for a sea wall. Residents told groynes remain an option but they'll have to pay for them. HBRC opposing residents attempting to build their own protection.

June 2002: McGlashan reported 1000 cubic metres of shingle were uplifted from Haumoana Beach during the April storm, lowering the crest by 70cm.

June 2002: A HBRC and HDC working party to develop a long-term strategy for the coastline between Clifton and the mouth of the Tukituki River agree on soft engineering options, including investing \$10,000 for replenishment and planting and \$25,000 on consultants for options for the Regional Coastal Plan.

19 June 2002: Richard Rienen-Hamill of Tonkin Taylor, the HBRC consultant, determines that further groynes set 400m apart would be the most effective means of preventing further erosion. The estimated cost was \$137,000 each.

May 2003: Five years after the original groyne application expired, a review stated "the groyne appears to be acting as intended". Consent given for a further 25 years (31 May 2028).

27 July 2003: Storms resulting in high seas. One house completely destroyed and four made uninhabitable at the corner of East Rd-Clifton Rd, severe structural damage to others. Many beach walkways demolished and sea damage to other private properties.

2004: Tonkin & Taylor report on Regional Coastal Hazard Assessment and Hazard Zone Definitions identifying current risk areas, those zones at risk by 2060 and by 2100.

17 March 2005: Swells up to 6 metres hit the Cape Coast, causing six homes to be evacuated and tipping an old bach into the sea. Several homemade sea wells were swept away.

31 March 2005: The controversial HBRC coastal hazard assessment report is released, listing 750 properties in Haumoana-Te Awanga and Clifton lying within a hazard area.

September 2005: Consultants Tonkin and Taylor reports to the HBDC that more gravel is being taken from the Cape Coast beach areas by commercial companies and northward drift than is being replaced naturally. Recommends reducing the amount of gravel being taken at Awatoto and embarking on a beach replenishment programme.

12 July 2006: The Joint Working Group deadline extended. Options are 'the status quo', managed retreat, soft engineering or beach nourishment, and hard engineering, specifically groyne fields. The preferred option is the groynes but the cost \$18.9 million for the full stretch of the coast, or \$13.5 million for the Haumoana coast only, is the main obstacle. Residents on the working group put forward a plan to cover the Haumoana coast only, without nourishment, for \$1.6 million.

21 November 2006: After 18 months the working party of HBRC, HDC and representatives from the Cape Coast communities still hadn't agreed on a solution for coastal erosion and inundation. A further report involving three engineering experts at a cost of \$20,000 is to report back by April 2007. Residents keen on groynes as an option but council experts claimed there wasn't enough information about the long-term impact of a groyne field.

11 Feb 2008: High seas pounded the coastline causing further erosion and damage. No 9 Clifton Rd suffered severe damage to timber retaining wall. Owners are advised that under the District Plan they are not allowed to replace it or repair it.

10 March 2008: The Te Awanga Society, once a hive of community energy but now worn down and no longer operating, organised a public meeting with Dr Shaw Mead on 'Appropriate Coastal Protection Solutions for Exposed Coasts'. About 80 people turned up to hear him extol the virtues of artificial reefs. A submission was put before local authorities but didn't seem to gain much traction.

April 2008: Residents in Haumoana and Te Awanga complain that a new report on coastal hazard zones has eroded property prices in the region

23 May 2008: Severe storms surges destroy remaining wall at 9 Clifton Rd over a 12 hour period, claiming up to 8m of land in front of dwelling. Concrete septic tank is swept away and foundations undermined. Tenant evacuated by Civil Defence, house abandoned.

July 08: 9 Clifton Rd breaks into two and slips on beach front.

28 January 2009: A plan for three groynes at a cost of \$4.5 million to protect the most at-risk properties is put forward by independent consultants Moynihan Coastal Consultants. This backs findings by consultants Opus in 2006, which claim three groynes will halve the flow of material and protect the coast. Senior consultant Steve Moynihan warns that without intervention Haumoana, Te Awanga and Clifton would face much more severe erosion.

January 2009: HBRC commissions an Environmental Management Services report to summarise findings of the various reports.

02 April 2009: The 'Tonks Report' recommends 'managed retreat' — essentially abandoning homes under threat — or residents paying for 90 percent of the cost of a field of 13 groynes at a total cost of \$18.5 million. The report was tabled at a closed meeting of both councils, stating the choice was now up to the communities.

29 April 2009: Tonks Report presented to the Haumoana and Te Awanga communities explaining in detail the 13 groyne approach, costs to be recovered from Haumoana and Te Awanga residents through a targeted rate of \$26,000-\$30,000 a year per household. The meeting was clearly designed to steer people toward managed retreat option, although few details provided. The general feeling at the meeting was to reject both options.

4 May 2009: A meeting of affected home-owners called by local resident Ann Redstone heard ideas for alternative approaches. A committee was nominated to look further into a solution and to make submissions to the HDC and HBRC 10-Year Plans.

6 May & 26 May 2009: Committee members meet to discuss issues, decide on the name, Walking on Water (WOW) - initially a sub-committee of the Haumoana Citizens & Ratepayers Association, with support from the Te Awanga Progressive Association (TAPA).

4 June & 9 June 2009: WOW committee put together stage one and two of a proposal for five groynes and a seawall to protect the H21 houses most at risk as stage one of a full coastal protection plan. Written and verbal submissions prepared for both councils.

29 June 2009: WOW presents its submission to a public meeting At the Haumoana Community Hall and asks for a signed mandate from the Communities of Haumoana, Te Awanga and Clifton before proceeding further. Over 1250 attended at 90 forms were filled in 98 percent in favour of the WOW proposal.

29 June -03- July 2009: High seas battered the coast. The access road into the Clifton Motor Camp is fully eroded and is closed; the future of the camp in doubt.

28 July 2009: Angus Gordon local landowner and proprietor of Clifton Café agrees to lease land for a new access way to Clifton Motor Camp and the Clifton Marine Club, to be paid for by the Clifton Domain Board. The concrete and rubble haphazardly placed on the coastline by the previous Harbour Board and residents will also be cleaned up. The road 'replacement' is considered part of the 'managed retreat' approach to give way to the sea. Hard engineering is rejected.

28 July 2009: Mark & Tracey Lawrence, who received a notice from the HDC to remove the 500 tonne concrete block seawall around the property, receive a similar notice from the HBRC.

5 August 2009: WOW representatives meet with Hasting Mayor Lawrence Yule, consents manager Mike McGuire and CEO Ross McLeod to discuss how the two parties might work together in achieving common goals at the forthcoming HBRC and HDC Joint Committee on Cape Coast Erosion issues.

12 August 2009: Steve Moynihan from Moynihan Coastal Consultants presents WOW committee with his proposal on how the five groyne option will work along the coast.

13 August 2009: WOW invited to take part in the Joint Committee Workshop. WOW asks the committee to retract its 13 groyne option, leaving only the managed retreat and WOW's five-groyne stage one proposal on the table. Agreed to meet again once HBRC and WOW engineers have come to an agreement on a common model.

10 September 2009: WOW writes to local councils requesting they desist from any further legal action against the homeowners in the 'at-risk' area on the corner of Clifton and East Rd until a solution on wider coastal protection is agreed on by the Joint Committee

Anything else? WOW would like to hear from anyone who can add dates and relevant flood and community or council coastal protection efforts to this timeline.

Please email wordman@wordworx.co.nz

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The fact is most of the homes under threat along the Cape Coast have been there for a good number of decades, are family homes, and most are fairly modest.

The idea of being forced to physically move your house to some as yet undefined location so the ocean can move further inland seems ludicrous to most people living along the Cape Coast. Regardless WOW is taking up the challenge to find the true social and economic costs of moving over 100 homes from the 'hazard zone' over the next decade or so.

It is currently talking to engineers, builders, plumbers, electricians, house removalists and others to build a model that will clearly show what's involved, who this process effects and the issues arising from 'managed retreat'.

Moving 'quite soon'? Homes from Van Ash Rd to East Rd, Haumoana are being targeted in order to provide future access if part of Beach Rd becomes unuseable.

There is an exodus plan for some of these homes and 'the 21' from the East Rd-Clifton Rd corner plus at least 55 homes at Te Awanga.

Apart from the amenities, public buildings and roads, the cost, estimated by Murray Tonks of the HBRC to be between \$7.4 - \$11 million, would be largely borne by the community. He suggests the removal of the first of those houses would have to start "quite soon".

While resource consents would not be needed to relocate the buildings, residents would have to pay for the land they relocate to, and building

consents would apply to anything done to make those homes habitable again.

On agreeing to the retreat option, home owners will be constrained from doing anything to further protect their beachside properties and would be required to remove them, along with remaining septic tanks and rubble at their own expense.

While this is still a 'work in progress', WOW has been asked by both councils to help them gain a realistic view of costs and whether retreat is in fact more costly than the hard engineering option to protect existing assets.

WOW suspects, even if the land for relocation is made available at less than market rates, that many houses wouldn't be up to the strain of being moved and that many people's budgets aren't up to the challenge either. Research so far suggests costs considerably higher than HBRC initial estimates.

WOW now has to show clearly that having the groynes in place to prevent further coastal damage is more cost effective than managed retreat. WOW wants homeowners to tell us what they think, with any helpful ideas, comments and impacts, economic or otherwise.

Write and tell us why you like living here and how managed retreat might impact you and the community you live in?

See contact details on page 2

... continued from pg 1

Shoreline shapeshifting Moynihan's 'crenulate bay' theory (see pic pg 1) contends that the 'equilibrium shape' of a soft shoreline is always the same, with size and location depending on wave directions and headland locations. Because shingle is being extracted at a similar rate to supply, wave erosion is now the predominant activity along the Cape Coast moving shingle from the southern beaches to the beaches north of Awatoto.

"There's no question groynes will work in stabilising and restoring the coastline here," says Moynihan. He believes the strong south to north movement of sediment along the shore, and the success of the Tukituki groyne, make it an ideal solution.

Essentially a groyne is a downstream control point. A fillet is formed on the upstream side by trapping moving sediment, however wave

energy will erode an equal amount on the downstream side. Moynihan says these effects need to be accounted for in the design and staged construction of groynes; the exact length of beachfront to be protected and the angle of the waves determine the length and spacing of the groynes required.

Shingle flow paused He says there would be two effects from construction of the groynes. The first would be short term and a one-off interruption of shingle flowing north while each groyne traps a fillet of gravel until it then begins to flow around the tip and continues on its journey. If required this gravel could be trucked in to artificially fill the south side of each groyne but this would add significantly to the cost.

Shingle stabilised The second impact of establishing the groyne field would be that the Haumoana shoreline would be stabilised. The groynes would trap shingle that would otherwise be transported north by the sea and the coastline would build-up.

Mitigating downstream effects Moynihan predicts that during the initial stage, while the groynes naturally fill with gravel, the rate of accretion northward of the groyne field would be up to 0.4m per year. This is equivalent to how much beach is currently being gained in this area, effectively meaning there is no erosion or growth beyond Awatoto while the fillets fill. If extraction at Awatoto was discontinued accretion north of Awatoto would continue even while the groynes were filling.

The other area of concern is the East Clive area where the Hastings district councils \$27 million sewage plant is located. Moynihan says that analysis of beach profiles since 1987 shows that the three groynes at East Clive and the one at Tukituki have stabilised 1.5 kilometres of beach.

He doesn't believe there's any evidence to support further impact from creating

more groynes to the south. Any changes at all would be manageable and close monitoring would pick up any potential adverse effects.

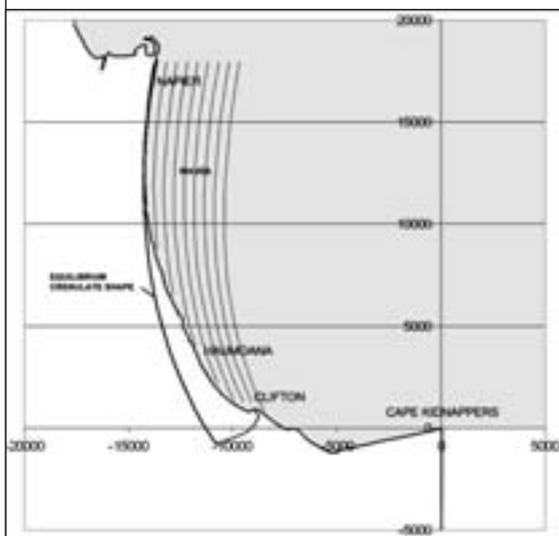
While the groynes would mitigate the need for a seawall around the most at risk homes at Clifton Rd-East Rd it would be a useful measure of additional protection and most likely have a longer life in conjunction with the groynes.



The next steps The WOW group, which commissioned Moynihan Coastal Consultants to undertake the work in this first report has now commissioned a second report with greater detail, including the specific design, cost and placement of the groynes. Moynihan will be working closely with Hawke's Bay Regional Council (HBRC) coastal engineer Richard Reinen-Hamill to ensure the approach is up to the specifications for Resource Consent application.

If the two engineers can agree on a way forward then WOW plans to expand the model to provide protection for Te Awanga and Clifton. Once the coastline has been stabilised it will review plans for a sea wall and/or walkway where this is appropriate.

A second meeting with the Joint Committee, including senior executives and engineers of both councils will be scheduled once WOW has been able to prove its case for a more affordable hard engineering solution to protect the Cape Coast from inundation and erosion.



COAST KIDNAPPED. The 'crenulate bay' formula applied to the coastline south of Napier, projecting thousands of years into the future assuming no action is taken, leaves the Napier foreshore slowly accreting but East Clive to Clifton literally wiped off the map unless hard engineering action is taken.



Council cookie jar empty

WOW promised to look into the carefully worded promises of the Hawke's Bay Endowment Land Empowering Act 2002, which set aside money from Hawke's Bay Regional Council leasehold properties to improve, protect and manage the coastline.

We learned about 800 leasehold properties, originally purchased from the old Harbour Board, have been sold off in recent years and now there's only 1100 contributing. There's also been a lot of requests to draw on those funds, as HBRC chairman Alan Dick discovered when he went looking for cash to help cover the cost of the clean up at Clifton.

According to HBRC group corporate services manager Paul Drury, the leasehold properties raised \$2.3 million to the year ending 30 June but qualifying expenditure was \$3.4 million and expenditure is likely to exceed revenue until around 2016.

He insists the money is all spent within the definition of the Act, for work on coastal and marine areas, and has been spent on coastal processes, hazard monitoring, investigation in coastal areas, and managing river outlets at the coast.

Currently there's \$5 million queued up waiting for access to revenues from the leasehold portfolio as part of the 10-year plan. As coastal protection along the Cape Coast (Haumoana, Te Awanga, Clifton) doesn't figure in the 10-year Plan then we're out of luck.

All that's left is targeted rating on those who most benefit from a scheme, or if the scheme is of direct benefit to the wider Hawke's Bay community it may become part of the general rating, or a mixture of both, based on a study of 'beneficiaries', says Drury.

Puzzling pit stop

When you've got to go, you've got to go. No question, and it's always a relief when you find somewhere safe and clean. Curious though that we now have an architecturally designed, environmentally friendly place 'to go' at a cost of \$120,000 but its precariously close to where the 'old' Clifton road was wiped out. Without hard engineering that coast is going to continue eroding, we only hope the next big storm doesn't flush out the new public loo too.

Graffiti vandals strike

Grrraffiti vandals — artist is too good a word — who add their personal marks of disrespect to the Cape Coast community, spraying their markings like a tom cat on the newly painted Four Square walls, neighbouring fences, on the sign warning of erosion and for goodness sake on the footpath. Go mess up your own backyard. We're tidying up ours.

Te Awanga Progressive Assn (TAPA): Dynamic proposal deserves support

Records on hand show coastal management issues have caused debate in Haumoana and Te Awanga since at least the 1950's.

Enthusiasm and commitment to finding a solution have all too often been stymied by council attitudes resulting in feelings of frustration and disappointment. The dynamic WOW proposal with its refreshing and creative alternatives to council's "beaten before you start" attitude deserves community support.

Apart from lodging a submission opposing certain areas of the HBRC's coastal erosion plan in 2006, Te Awanga Progressive Association (TAPA) has not played a significant role in challenging the councils' interpretation of the Resource Management Act as at the time it acknowledged the Te Awanga Society (formed for that express purpose) was presenting a far more comprehensive and scientifically-based document.

Clearly though, our objectives in protecting our beachfront from erosion remain the same and once

again we were disappointed to find the request to establish a Management Plan with HDC and community groups to re-instate the Te Awanga and Haumoana Coastal Hazard Working Party fell on deaf ears.

The WOW proposal is the most positive and far-sighted document relating to 'Cape Coast' ever put before either council and gives residents an opportunity like never before to present a united front in dealing with these issues.

We believe it's not just a case of "those along the beachfront" who will be affected by lack of action. Homes and businesses, those financial assets, 'nest eggs', 'legacy for the family' may not be quite so valuable or desirable further down the track if access to them is threatened.

It's often said 'you get the conditions you deserve' ...we deserve better'. Oh...and as for those tyres, proponents swear they work and have photos to prove it.

— Gail Shaw, secretary, Te Awanga Progressive Association (TAPA)

Haumoana Ratepayers Association: Building on past community effort

When I took over the Haumoana Ratepayers Association five years ago, after much persuasion from the late Joan Scott, my first year's efforts were in trying to ensure bikes & quads had continued access to the beach. It was said the vehicles were causing erosion, but my argument was that the erosion was a bigger issue.

When a committee was formed to look at the three options given to the community by the local authorities as a response to coastal erosion; hard engineering, soft engineering or managed retreat, I put my hand up to be involved. Many people told me I was wasting my time because the issue had been debated many times before and nothing had happened.

After numerous meetings and many hours of time and effort the Coastal Erosion Working Party, made up of members of the local community and Hastings District and the Hawke's Bay Regional councils, was abandoned because representatives could not come to a unanimous decision. We were told the matter would now be in the hands of three independent coastal engineers.

The next I heard, a meeting at Haumoana Hall had been arranged where the community was informed of the \$18 million groyne option or managed retreat, even though no-one had figured out where those

affected homes would retreat to. Having already spent two years debating these issues with the councils I felt they were trying to divide the community, and be told to 'do nothing'.

Fortunately for our coast there were some people ready to put their hands up and say enough! The WOW Group was formed and now we have what I feel is the best chance ever, of having the local councils take some responsibility for our community wellbeing and protection. If we can stand together, united with one voice and focussed on a single direction they will listen.

Some people won't fully agree with groynes as a solution, and some people just won't care. All I know is we have three groynes already on our coast and they all work! The HBRC fought to get the Tukituki groyne built, now they fight not to have any more.

The WOW concept is visionary and conceptually sound. As the chairman of Haumoana Ratepayers Association I am supporting WOW in their attempt to help save the Cape Coast.

— Rex Mildenhall, chairman Haumoana Ratepayers Assn



From the Throne Room: Regal ranting to rouse ratepayers

As the Regal Head of Haumoana, I feel a need to address the issue of Erosion and the planned managed retreat option proposed by the council.

What I think is needed is a blood stirring speech to galvanise the coastal community of Haumoana, Te Awanga and Clifton. I asked my speech writer and good buddy Sir William Wallace of Scotland to eloquently expand my simple sentiments of "We shall not retreat".

"I am King Andy of Haumoana. And I see a whole army of my countrymen, here in defiance of tyranny! You have come to fight as free people. And free people you are!

What will you do without freedom? Will you fight?"

"Two thousand against ten?", the embattled ratepayer shouted.

"No! We will run; and we will live!"

"Aye! Fight and you may lose. Run and you will live... at least awhile.

And lying in your bed many years from now, would you be willing to trade all the days from this day to that for one chance, just one chance, to come back here as young people and tell our councils that they may take our lives but they will never take... our FREEDOM!"

— King Andy



Feedback and letters

12 August 2009

What a fantastic newsletter - well done!!! Awesome design - please pass on my regards to Andy and co.

Linda Roberts • Wordcopy

Margot Macphail was responsible for the layout. Andy did the goat cartoon and the Tui ad take-off. I agree a great team. Editor.

Encouragement from US

Dear Editor (Referred on from DomPost)

I have read the excellent report by Marty Sharpe and am struck by the similarity of position your coastal dwellers find themselves in and our own situation here in East Anglia UK.

My community Happisburgh, in North Norfolk, has already lost 26 properties to the sea. Just over ten years ago we formed an action group to lobby Government. In 2005 an updated Shoreline Management Plan (SMP2) was launched for our part of the coast which changed the policy in some areas from Hold The Line to No Active Intervention, this prompted me to call a series of eight public meetings along the affected coastal strip and one inland. This gave the people a voice and since that time we have very much been included in Government thinking.

Along the way we have created two websites one centred on our home village and its problems www.happisburgh.org.uk where you will find many aerial photographs and more recently www.nvcc.org.uk (National Voice of Coastal Communities) which gives a clear view of the National picture re coast management and coastal erosion.

In recent years I have become an external member of an All Party Parliamentary Group (APPG) on Coastal and Marine Issues so we have a voice within Parliament itself and am now Chairman of the recently formed NVCC.

Throughout our groups existence I have campaigned long and hard for Social Justice (some form of compensation) for those who lose property to the sea particularly where policy has changed.

My message to your readers is very much based on our experience, get organised, get vocal and go for the top of whichever form of Government (Local or National) has control of managing the coast. To all coastal dwellers covered in your article I would say this small community here, Happisburgh, understands and shares your anger, fears and frustration. Our hearts and minds are with you, good luck in all that you do.

Malcolm Kerby, Co-ordinator Coastal Concern Action Group (CCAG), Happisburgh, USA

04 July 2009

Greetings

As long as I have lived in Haumoana, 12 yrs now, I have heard how the councils have played a major part of the erosion of our beach by the taking of shingle from the Tukituki. Recently I had the cause to take an out of town visitor to the Bluff Hill Lookout, great vantage point to view the bay. It's also a prime point to view the port and all the going ons there.

I saw a line of truck and trailer units carrying shingle, they looked like Tonka toys, each took their turn to dump their load and a bulldozer pushed the shingle into the sea. I thought to myself "My God they are filling in the ocean. And that's shingle from our river they're doing it with".

I realize the remedial action required to save our coastline is a huge and well calculated plan but surely in the meantime couldn't council be doing what has been suggested for the past 10yrs? For every 4 truckloads of shingle they remove from our river put 1 load onto the beach?

I am keen to be of any assistance I can with our cause to save our coastline. I'm not sure in what capacity, I can lick stamps and address envelopes!...I'm sure there are several in the community who just need a call to action and they will stand forward.

Paula van der Meer

The WOW group is fantastic and doing a great job - keep it up. It would be wonderful to have a seaward walkway for all to enjoy.

Janelle Ritchie, Te Awanga Motor Camp

Short Waves ...

WOW wants councils to stop legal action

WOW has written to the Hawkes Bay Regional and Hastings District councils asking them to hold off on pursuing any further legal action against residents in the 'at risk' 21 homes at East Rd-Clifton Rd.

WOW believes any further efforts by either councils to enforce their abatement notices, requiring property owners to remove hundreds of tonnes of concrete structures designed to protect their homes, will not only put those homes further at risk but also bring unnecessary financial burden and stress to the families involved.

Part of the solution being sought by WOW in regard to these properties is a highly engineered sea wall-walkway aka 'sea exclusion bank' that would wrap around those properties and, along with the groynes, provide a solution to the problems of inundation and erosion being faced here.

While WOW is in discussion with the councils over these issues it believes it would be unfair for them to continue to pressure the homeowners affected.

Owners have said they would rather contribute toward the WOW sea wall / sea exclusion bank solution and the cost of the groynes than pay all the legal fees they are now faced with as a result of battling councils and preparing for an Environment Court hearing.

The WOW committee unanimously agreed to ask both councils to stop all legal action until this matter can be resolved in a more conciliatory manner, preferably as part of the wider WOW proposal now under consideration.

WOW Vision feedback

The plan appears practically and financially prudent. One assumes that it is possible to implement it in full or in steps and effects will be monitored to collect a body of hard data from the present day baseline.
Hugh Homes

At least somebody/community can stand with pride for what they believe in. Its absurd that the Councils of both cities (Hastings & Napier) can sit back and wash their hands of helping its people. Rosemary Guinea.

Well done guys. Behind you 100%. Heather Shergar

This is a stunning community - a real pleasure to live in. It is just not 'our' place but it is part of Hawkes Bay community and Aoteroa NZ. Just because there are issues that may pose a challenge for Councils - doesn't mean they can or should walk away. I say lets work with Councils and work towards finding positive solutions. The WOW VISION is a great starting point and I am willing to help out in any way I can.
Irene O'Connell

Am sending donation, exciting to be part of. Thank you!! C Jones

I believe that the coastline is NZ and therefore be covered by all Nzers. This means \$30 out of the already paid rates around the country shall be pooled towards this project. So especially for the erosion we all need to pull together. As we need to pull money towards other natural disasters where the local people are not causing the problems, like flooding. Hilda Meier

It can be done, if the Dutch can protect their country and land which is 50% below sea level then the kiwi's can protect this coast. The problem is motivation... M & W van Hoojdonk

P7
SEPT 09

 WALKING ON WATER

Cape Coast: Giving Hawke's Bay an edge

WOW is not just about hard engineering, we're softies really. We love the unique, rugged nature of our coast, where the ozone charged breeze blows in across the wide open Pacific and the ocean pounds out rhythms on our gravelly shores.

While we're working with the Hawke's Bay Regional and Hastings District councils to sort out a solution to the ongoing erosion and inundation threat, we believe Haumoana, Te Awanga and Clifton coastal communities deserve a better regional and national profile.

WOW has been describing the area as Cape Coast from day one. We believe this term of endearment has something edgy about it, so we asked WOW committee member and iconic artist Dick Frizzell, to design a logo. Cape Coast – Giving Hawke's Bay an edge.

We think it works as a statement, giving local businesses, tourism operators and residents a catchy phrase to embrace as their own. This area, perhaps more than any, represents all of the different features and assets that make Hawke's Bay special.

Even in the off-peak season there's a steady stream of traffic heading out to world class wineries, the Clifton Café, the Clifton Marine Club, the motor camps or for fishing, cycling, walking or sightseeing.



Giving Hawke's Bay an Edge

The renowned Gannet Colony alone brings about \$1.5 million into the local economy annually, Kidnappers Golf Course is ranked as one of the best in the world; Clearview Estate has won international wine and national food awards for several years. Elephant Hill is setting a standard in quality that is hard to emulate.

The eclectic nature of the region has produced the Kidnappers Escape tourist brochure that is upheld nationally of an example of what a community can achieve. In short the Cape Coast is a huge regional asset bringing in major tourist dollars.

Our Cape Coast branding represents our great hope that once the groynes are in place protecting the coast and restoring the beaches there'll be an ongoing process of beautification including walkways, reserves, landscaping, planting and public artworks.

The WOW vision is one of hope and promise for a brighter future which restores some dignity to our coastal community and a literal edge we can all be proud of. We're going to keep saying it until it sticks: Cape Coast— Giving Hawke's Bay an edge.

NB: The Cape Coast web site will soon be launched, embracing the spirit of the region and its scenic, creative and culinary wonders, representing the best that Hawke's Bay has to offer. At the moment we're relying on the help of 'the King of Haumoana' Andy Heyward and his very useful www.haumoana.co.nz web site to keep everyone informed.

A big thanks to the following sponsors

Allsteel Engineering	06 879 5255
Bridgeman Concrete	06 879 7254
Canzac	0800 422 692
Deakin Motors Ltd	06 879 7176
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Kaipara Ltd	09536 5152
Kinetic Electric Solutions Ltd	06 878 1103
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PricewaterhouseCoopers	06 835 6144
Sika NZ Ltd	0800 SIKA NZ (745 269)
Stevenson's Engineering	09 955 4900
Gary Taylor Employment Law	06 835 6147
The Landscape Shop	06 879 7254

Help cover our costs

Hearty thanks to the individuals who have made donations toward WOW's ongoing campaign to protect the coastline from erosion and inundation. Hiring a top coastal engineer to help flesh out the proposal up to resource consent standards doesn't come cheap.

Fortunately through the generosity of certain individuals we can say we've paid our first major account. Now we're embarking on the next level of consultation where our coastal engineer has to down to the specifics on groyne design and placement, and find agreement with the HBRC on the way forward. Any contributions toward covering this account much appreciated.

We're also looking for sponsors for our next newsletter and plan to hold some public fundraising events which we'll keep you informed about.

WOW is registering as an incorporated society and seeking charitable status so donations can be tax deductible. We have a Chartered Accountant to ensure we stay within the law in all financial and accounting matters. Please let us know the details of your payment if you would like to have a receipt for any amount you care to deposit.

Walking on Water Bank TSB Account:
ACCOUNT NAME: Walking on Water
ACCOUNT NUMBER: 15 3979 0002066 00



WOW HELPERS:
 Volunteers fold, collate and prepare the first WOW Newsletter for distribution to every household in the Cape Coast.
 Left to right: Bree Cabanella, Rex and Margaret Read, Hilda Meier, Margot Macphail and Steve and Linda Ward.