

# CLIFTON TO TANGOIO COASTAL HAZARDS STRATEGY 2120

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## MINUTES OF THE SOUTHERN CELL ASSESSMENT PANEL WORKSHOP 2 HELD AT THE HB REGIONAL COUNCIL, DALTON ST, NAPIER, AT 5.00 P.M. ON THURSDAY 2 FEBRUARY 2017

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### PRESENT

#### Panel Members:

Martin Bates, Tom Evers-Swindell, Mike Harris, Te Kaha Hawaikirangi, Paul Hursthouse, Peter Kay, Brent McNamara, Mark Mahoney, Bruce Meredith, Keith Newman, Aki Paipper, Duncan Powell, Maurice Smith, Jamie Thompson, David Wells.

#### Facilitation Team:

Peter Beaven (Chair), Des Ratima, Stephen Daysh, Simon Bendall, Jan Seaman (Minutes)

#### Observers:

Tom Belford, Mark Clews, Gary Clode, Larry Dallimore, Craig Goodier, Rod Heaps, Bruce Lochhead, Dean Moriarty, Ann Redstone, Emma Ryan, Mike Adye

#### Technical Advisor:

Richard Reinen-Hamill.

### APOLOGY

Waylyn Tahuri-Whaipakanga, Sarah Owen.

### WELCOME AND INTRODUCTIONS

Des Ratima opened the meeting with a karakia. The Chairman briefed the meeting on housekeeping and safety matters, which included exits and assembly points in the case of an emergency. Richard Reinen-Hamill, Principal Coastal Engineer, Tonkin + Taylor was introduced.

### CONFIRMATION OF MEETING SCHEDULE

An updated list of panel members and revised meeting dates was tabled. Site visit was confirmed as 16 February and it was suggested members join the Northern Cell site visit if this date was not suitable. Hard copies of Agenda and Terms of Reference, with minor changes from Tuesday's meeting, were also tabled.

### CONFIRMATION OF WORKSHOP 1 MINUTES

#### Motion

That the Minutes of the Workshop 1 meeting be confirmed as a true and correct record.  
The motion was moved, seconded and carried.

### THE PROCESS AHEAD

The following points were highlighted.

- Living at the Edge information was included in the Resources section.
- The Draft Stage Two Report: Decision-making Framework, was also contained in the Resources section.
- The focus of the meeting would be to present technical information, largely from Tonkin + Taylor.

- Workshop 3 – site visit.
- Vulnerability Assessment will need to be prepared, which will be tabled after Workshop 3 for discussion at Workshop 4.
- Focus of the panel should be on priority coastal units under threat in the next 10 – 30 years and options going forward.
- “Managed retreat” will need consideration as a concept.  
*Question: If certain areas are particularly vulnerable now can the panel make recommendations to councils before this process is complete?*  
*Reply: While Panels can make recommendations at any time, the strategy is seeking to develop a coordinated approach to responding to coastal hazards risks.*  
*Question: Are there aerial photographs to show coastal changes?*  
*Reply: Yes there are some available. TAG will look into this and can be sourced.*  
**Action: Investigate historical mapping information and how it can best be used.**  
*Question: Who will co-ordinate public feedback?*  
*Reply: The information will be collected by TAG who will support the panels and information will come back to the panels for consideration.*
- The process of scoring options will initially be completed without consideration of costs. A cost benefit assessment will then be prepared which may change the order of preference.
- *Question: Could the Local Government NZ Report, which is in the draft stage, have an impact on panel proceedings?*  
*Reply: Initially it was thought that this question related to the national level guidance being prepared by Ministry for the Environment. However it was later clarified that in fact there had been a recent newspaper article mentioning that Local Government NZ was preparing something separately from the Guidance.*  
**Action: TAG members will endeavor to find out more about this matter and will report back.**

Suggested panel members go through the documents and any matters for clarification can be dealt with at the start of the next meeting.

## PRESENTATION ON COASTAL PROCESSES, HAZARDS AND RISKS

Richard Reinen-Hamill of Tonkin + Taylor showed a presentation on the overhead entitled “Clifton to Tangoio – Coastal Hazard Strategy 2120 – Southern Cell”. A hard copy of the presentation was available for members after the meeting. Points and queries raised were noted as follows.

- The Komar 2013 report was valuable as it consolidated important information from previous reports. The 2005 Shoreline Modelling Report was also important.
- Confirmed there were about 25 years of wave records.
- The Komar report contained information on what comes down the rivers and how the waves have pushed up a barrier of gravels, i.e. a barrier system controlled by the sea. Gravels did historically come down the river when sea levels were lower.
- Extraction of beach materials. Confirmed that if there is no extraction gravels would accrete at Awatoto, which would have a beneficial effect, i.e. man’s intervention has contributed to erosion.
- Movement of sand and gravel. The beach is a mix of sand and gravel and greywacke that abrades quite rapidly. The sand and finer fractions migrates to deeper water and the gravel is shifted generally northwards by wave movement. (This is called littoral drift or longshore drift)
- The Port of Napier – does this act as a groyne for buildup of material on the southern side? Less so than other areas as there is close to zero transport of material at that point of the coast as the rate of longshore drift reduces with reduced wave angle. It starts to settle and moves to the north at a much slower rate past Awatoto.
- The Ngaruroro River does not contribute any significant gravel material to the coast as it has been diverted – it provides a flow of water but very little coarse sediment. Gravels are deposited further upstream.

- The Ruataniwha dam and its effect on gravel and sediment was queried. Gravel ends up at the base of the Heretaunga Plains and it is not getting driven to the coast. There would be little change in sediment supply to the coast, although it was noted there is a resource consent condition associated with the Ruataniwha Dam to supply additional gravel to the coast either side of the Tukituki River mouth.
- Tutaekuri and Ngaruroro rivers sediment – finer materials do not end up on the beach. Materials have been taken from the lagoons and this may have created a “sink”, which is now being filled in.
- Tukituki river – gravel being taken further up is not having an affect now; the flow is not consistent due to weather. Figures shown are for a longer-term average.
- Some beaches (e.g. Westshore) had good sand and no gravel in the recent past. This was explained as being due to the impact of the earthquake. In the north, the land was raised up to two metres and in the south the land sank a metre but the effect of this was cushioned by large volumes of gravel natural forces have taken decades to move. Now the supply getting to the coast is lumpy – almost none some years and more in times of storms and floods.
- Cape Kidnappers is eroding and also provides a source of gravel.
- The shingle tends not to go out into the bay. Sand migrates offshore and gravels migrate onshore.
- Inundation. This has a bigger risk of effects in the catchment area than from erosion. The data can be used to work out how much would be needed to reduce the risks of inundation. However, gravel banks are a permeable barrier and some water will pass through. Inundation will not necessarily become greater after erosion as the shoreline can roll back. The gravel crest would probably not all go and would continue to build up, however, it may be at a different location. With erosion the material moves somewhere else.
- Economic impact is value of properties, infrastructure, assets, road, rail etc. and all risks are based on present-day values.
- The possibility of beaches becoming sandier over time would depend on where they were. The natural barrier would roll landwards and reduce in overall volume.
- The work of the panels will be focused on inundation and erosion, as there is little that can be done to respond to tsunami other than civil defense planning and response. Some options being considered to respond to erosion and inundation may have some benefit to tsunami mitigation however and this should be kept in mind
- Studies and solutions developed from other countries facing similar hazards and problems is available. However things like length of coastline and population available to fund solutions is probably only the same in parts of Australia. Engineering solutions may be useful to delay things for a period of time, however, it would be necessary to work out what to do with the time bought.
- There is not many places in the world with mixed gravel beaches similar to those in HB. NZ has some of the largest amounts of mixed sand/gravel beaches in the world. Oregon has some but the population is quite different and the mindset has been more on protection.
- Regarding processes for community based solutions, NZ is ahead. The process of providing information and getting community engagement/brainstorming solutions is where other places in the world would like to be.
- Richard Reinen-Hamill confirmed he had peer reviewed the Komar report, which was a synthesis of other people's reports. An external review was carried out on the project team. There is also a lot of information that supports the erosion and long shore transfer process.
- With regard to the baseline for where data starts in order to determine how much has eroded along the coast, it was confirmed that this started in 1989 and HB is continuing to carry out profiles. The average rates were looked at and a common period found where the beach profiles started from, looking at the long term average, trends and end point values.
- Protection work at Clifton starts on the northern side of the campground and early photographs will pick up differences in relation to erosion.
- Industries such as the extraction of coastal gravels are no longer operating elsewhere in the world.
- Confirmed cliff erosion and river supply are the two main sources of sediment coming into the system and the shingle structure at the southern end of the bay is substantially different to the northern end.

- Lagoons behind a shingle bank can provide an effective natural barrier. Actually providing a space for the coastal barrier to move is a good way to achieve space for sea level rise.
- Putting in groynes at the southern sector would store material but this would alter the movement of sediment north along the coast, as sediment is initially trapped, and wave angles are altered. This would also have a consequence somewhere else, i.e. it would increase the erosion further north. It would deal with the issue for a period of time but would not solve the problem without significant ongoing maintenance costs. The Tukituki groyne has resulted in an adverse effect on the erosion in HB5 section.

Further information is available on the website and if required members should contact Monique to have information printed. The Komar report is available on the HB Regional Council website.

## **EDGE EVALUATION SHEET**

The Edge science team requested a short evaluation be carried out at the end of each meeting to evaluate progress. Survey forms were circulated for voting members only to complete. There will be an online link to the survey, which has the same questions, if members prefer that medium. Participants' information sheet was provided, which outlined the research project.

If any information is required throughout the process then Emma Ryan from Edge should be contacted in the first instance.

***Action: Agenda to be emailed prior to the next meeting.***

***Action: Configuration of the meeting room and seating arrangements to be reviewed.***

***Action: Follow-up with absent panel members.***

## **NEXT MEETING**

The next meeting (site visit) will be on 16 February. Members to meet at the Regional Council offices for an 11.00 am start.

Des Ratima closed the meeting with a karakia.

The meeting closed at 8.00 p.m.