

# **Buffalo Beach Trial Groyne**

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**TO** Mercury Bay Community Board  
**FROM** Allan Tiplady - Acting Mercury Bay Area Manager  
**DATE** 3 November 2015  
**SUBJECT** **Buffalo Beach Trial Groyne**

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## **1 Purpose of Report**

To provide the Community Board with options on construction materials for the Buffalo Beach trial groyne.

## **2 Background**

Stage two construction of the Buffalo Beach rock seawall has been completed, with a further stage consented but not being constructed at this present time. Council has committed to a trial groyne to be located at the end of the stage two rock seawall, sufficient to encourage sand build-up north of the groyne.

It is anticipated that the sand build up will be sufficient to negate the construction of the consented stage three rock seawall, and will allow dune planting and enhancement in this location.

## **3 Issue**

Tonkin and Taylor Ltd (T & T) have been engaged to design and obtain a 5 year resource consent for a trial groyne for Buffalo Beach. A draft Assessment of Effects on the Environment (AEE), **Attachment A**, has been undertaken with the net result that T & T recommend the construction of a timber wall of length 25m extending out from the new stage 2 Buffalo Beach rock wall, **Attachment B**.

Under section 3.2.2 of the AEE, "A groyne of wooded piling and lagging will provide the desired flexibility and essentially allow a physical model to be developed at the site". "The groyne needs to be able to be extended vertically in the event that accretion of the beach profile occurs and the crest height is reduced as a consequence". "The pile and lagging design will provide for a modular type structure to be installed, modified as required and removed at the expiration of the coastal permit or sooner if deemed necessary or appropriate".

The Coastal Erosion Group at its meeting of 25<sup>th</sup> September 2015 indicated a preference for a rock filled gabion basket groyne structure to be constructed as they were of the opinion that a gabion basket structure is easily constructed, amended and deconstructed.

## **4 Discussion**

The Board is requested to discuss and recommend the material that the trial groyne is to be constructed in, taking into account the T & T AEE recommendations, and the recommendations of the Coastal Erosion Group.

At the Coastal Erosion Group meeting it was noted that gabion basket groynes were installed along Buffalo Beach in the 1980's that the the public members of the Group believe were successful in depositing sand along Buffalo Beach. These groynes were subsequently removed after many years' service due to deterioration of the gabion baskets,

the subsequent loss of the rock spalls plus the associated health and safety concerns. The public members of the Group were confident that new technology in the gabion basket field (plastic coated) would be sufficient for this purpose.

T & T has recommended a wooded piling and lagging groyne that they believe will provide the flexibility to allow a physical model to be developed at the site. T & T maintain that the groyne would be able to be extended vertically in the event of accretion, modified as required during the term of the consent, and removed at the expiration of the consent.

One other option that has been discussed is the use of rock the same dimensions as the stage two Buffalo beach seawall, so that the trial groyne "fits in" with the current.

## **5 Suggested Resolution(s)**

That the Mercury Bay Community Board:

1. Receives the 'Buffalo Beach Trial Groyne' report, dated 3 November 2015.
2. Recommends that the Buffalo Beach trial groyne design and resource consent application is completed utilising wooded piles and lagging.

## **References-Tabled/Agenda Attachments**

**Attachment A** *Tonkin and Taylor Ltd - Resource consent application and assessment of effects on the environment - March 2015 - DRAFT*

**Attachment B** *Tonkin and Taylor Ltd - Proposed trial groyne plan and longitudinal section*

**Attachment A - Buffalo Beach**

**Attachment B**

**Attachment B - Buffalo Beach Trail Groyne Plans**