

Report No:	RESC12-08-07
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Date:	10 August 2012
Information Only – no decision required	

Report to: Engineering Services Committee
Meeting Date: 30 August 2012
Report Author: Sarah Downs – Transportation Planning Officer
Subject: **Port Motueka – Jakkett Island Erosion Project**

EXECUTIVE SUMMARY

This report provides information on the assessment and refinement of practicable options to manage the erosion experienced along the seaward edge of Jakkett Island. An update on the interim works on the Van Dyke property and the Port Motueka Groyne removal is also provided along with details of expenditure to date on the Jakkett Island Erosion Project.

RECOMMENDATION/S

Staff recommend that the Engineering Services Committee receives this report.

DRAFT RESOLUTION

THAT the Engineering Services Committee receives the Port Motueka – Jakkett Island Erosion Project report, RESC 12-08-07.

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Subject: **Port Motueka-Jackett Island Erosion Project**

1. Purpose

- 1.1 This report provides information on:
- The assessment of practicable options to manage the erosion experienced along the seaward edge of Jackett Island;
 - Ongoing consultation with stakeholders;
 - Progress with the removal of the Port Motueka Groyne;
 - Maintenance of the geotextile sand bag wall on the Van Dyke property; and
 - An update on project expenditure to date.

2. Background and Assessment of Practicable Options

- 2.1 The issues arising from this project stem from the Environment Court Interim Decision (ENV-2010-WLG-00080&81) in the matter between the Van Dyke Family Trust and the Tasman District Council issued in March 2011. The Court found that the placement of the Port Motueka geotextile groyne on the Motueka sand spit by the Council in 1996 has led to the formation of the spit in its present form which in turn, has brought about the erosion on Jackett Island.
- 2.2 At its meeting on 15 September 2011, the Committee received a report on the Port Motueka Groyne and Jackett Island Erosion Project and approved the definition of the project problems and objectives.
- 2.3 At its meeting on 8 December 2011 the Committee accepted the nine preliminary practicable options for the project as a basis for stakeholder consultation.
- 2.4 At its meeting on 15 March 2012 the Committee accepted the Draft Practicable Options Report which included ongoing assessment work by Richard Reinen-Hamill of Tonkin & Taylor Ltd.
- 2.5 The report set out the practical physical works options associated either with a new accessible navigation channel or modifications to the distal end of the spit and transfer of sand to rebuild the Jackett Island shoreline. The aim of the option development is to refine potential physical works options to model and identify opportunities and constraints of the options.

- 2.6 Richard Reinen-Hamill discussed the assessment approach and modelling of options with the following technical experts: Professor Bob Kirk (retained by the Van Dyke Family Trust); Gary Teear, Ocel Consultants (retained by the Port Motueka Users Group); and Ron Heath an independent interested party.
- 2.7 After the experts meeting on 14 March 2012 it was agreed that the modelling process would be calibrated. The modelling work is being undertaken by MetOcean Solutions Ltd. Peter McComb supervises the work and is also involved in the technical expert discussions. The Practicable Options Report was finalised.
- 2.8 Modelling options on a new accessible navigation channel were defined and agreed upon by the technical experts. Calibration of the modelling has been reviewed and final verification checks were completed by May 2012. The modelling of the potential physical works options began in early June 2012. A report on the modelled options is now due in September 2012.
- 2.9 The modelling of one option was selected by the team of experts identified in paragraph 2.6 during a teleconference held in May 2012. The selected option was chosen at this stage as the training wall was already in existence and reduced the cost of the modelling. This option was identified in the practicable options report presented to Council in March 2012. It was generally accepted that there may be a need for further options to be modelled, once the results from this option were analysed.
- 2.10 Apart from the practicable option identified in paragraph 2.9 of a navigable cut through the spit (this would also require for the existing channel to be maintained), Council also needs to be aware that other practicable options can still be considered. These include:
- The transfer of sand from the distal end of the spit to Jackett Island along with small scale channel improvements;
 - Planning responses, which would prohibit new development within extreme hazard areas;
 - Asset relocation – this would require moving of buildings in hazards areas away from erosion areas
 - Asset purchase - the purchasing of properties and buildings from landowners.

3. Stakeholder Consultation

- 3.1 Collaboration with the technical experts is continuing. The latest teleconference calls were held on 27 July 2012 and 15 August 2012. In these teleconference calls the expert group discussed the modelling to date and agreed on the next step forward. The consensus was that an iterative process was required. The need to model an alternative cut in the spit has been discussed and is still a modelling option.
- 3.2 The timeline on the Council website has been updated to reflect recent changes.
- 3.3 A copy of the adjusted timeline has been sent to Fletcher Vautier Moore to be forwarded to the Environment Court.

- 3.4 Stakeholders have been kept informed through regular emails on the progress of the groyne removal and the numerical modelling. Once a preferred option has been selected, consultation with the local community and stakeholders will take place.

4. Groyne Removal

- 4.1 Resource consent for the full removal of the groyne was granted on 12 March 2012. Conditions of the consent stipulated that the groyne had to be removed in full before the end of August.
- 4.2 Staff awarded a short-form contract to Taylors Contracting. Taylors are currently locating a work site on the spit in conjunction with the Department of Conservation. Philip Drummond is the Engineer's representative to the Contract.
- 4.3 A variation was sought on the resource consent to allow refuelling to occur on the spit to minimise the movement of machinery either along the spit and the costs of barging the machinery across the harbour. This was granted on 19 June 2012. This would save money and cause less damage to the spit.
- 4.4 The physical work on the removal of the groyne began on 25 June 2012. The contractors have experienced delays because of the poor weather conditions.
- 4.5 To date, the exposed parts of the groyne have been successfully removed.
- 4.6 As of 10 August 2012, the only remaining section of groyne to be removed is a short 90 metre section which is underwater and sand. The weather at the end of July and the beginning of August have made it very difficult for any further progress to remove the remaining section. The presence of oil drums and old fertiliser sacks, plus another ground cloth have been discovered by the contractors in the process of removing the groyne. This has added further complications to the removal of the remaining groyne under the water. The contractors believe that these articles were used for weighting down the groyne when it was installed. They have also found little evidence of the side sausages which were meant to be part of the original design.



The photographs above show the groyne removal process for the remaining sections under water

5. Maintenance of the Geotextile Sand Bag Wall

- 5.1 Since the storm event on 6 June 2012 when there was damage to a part of the geotextile sand bag wall on Jackett Island there has been ongoing monitoring of its stability, especially during times of poor weather conditions.
- 5.2 Resource consent for a sand supply from Rabbit Island was granted in July 2012. This sand will be used for the rebuilding of the geotextile sand bag wall when required.
- 5.3 The beach profile was surveyed in full on 27 June 2012. The results from this will help Tonkin and Taylor develop an action plan to repair the wall. The intention is to use

bigger bags supplied by Maccaferri. However more work around the layout and cost of this redesigned wall are yet to be completed.

- 5.4 There have been other poor weather events since the storm event of 5-6 June 2012 and the geotextile sand bag wall has been 'holding the line' as required by the Court and as designed.
- 5.5 A work action plan has been developed by Tonkin and Taylor for the rebuilding of the geotextile sand bag wall.

6. Project Costs

- 6.1 Costs for this project from 1 July 2011 to 9 August 2012 total \$916,084.00.
- 6.2 Further costs relating to the current works will fall within this financial period; these works include the remedial work carried out during the storm event in June and the recent survey of the beach profile. While the modelling is taking place, there are ongoing costs.
- 6.3 Other costs attributed to the matters around Jakkett Island that have yet to be charged include the modelling work around the long term solution and costs associated with the removal of the groyne.
- 6.4 In the Long Term Plan there is a capital works budget of \$2.86 million provided in 2013–2015 (Years 2 and 3) to implement a preferred option. This capital project is to be loan-funded and serviced by general rate.
- 6.5 The Environment Court resolution of the further additional costs claimed by the Van Dyke Family Trust totalling \$252,197 was discussed at a court mediation meeting on 31 July 2012. This mediation process is ongoing.

7. Timeline/Next Steps

- 7.1 Staff will continue to progress work and intend to report on a preferred option to the Corporate Services Committee meeting in September 2012. It was felt that the Engineering Services Committee meeting on 11 October 2012 would restrict Council's ability to meet the timeline set by the Environment Court. To get to this stage, the results from the modelling will require analysis by the technical experts. Further modelling after collaboration may also be required.
- 7.2 Staff will investigate the need for a cost:benefit analysis on any preferred option.
- 7.3 Staff will continue to consult with stakeholder groups as the practicable option assessment works are developed.

- 7.4 Staff will report back to the Environment Court on progress against the updated programme previously submitted.
- 7.5 A report is being prepared by Tonkin and Taylor outlining and summarising the technical advice given to date on the interim sand bag works.

8. DRAFT RESOLUTION

- 8.1 THAT the Engineering Services Committee receives the Port Motueka – Jackett Island Erosion Project report, RESC12-08-07.**

Appendices:

Appendix 1 – Jackett Island Erosion Study - Progress Report July 2012