

Report 11.98
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Committee Hutt Valley Flood Management Subcommittee
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Hutt River Upper Reaches: Projects' Update

1. Purpose

To update the Subcommittee on progress with projects in the upper reaches of the Hutt River.

2. Significance of the decision

The matters for decision in this report do not trigger the significance policy of the Council or otherwise trigger section 76(3) (b) of the Local Government Act 2002.

3. Background

A number of projects in the upper reaches of the river are either underway or are now complete.

The 2010/11 annual plan provides a total of \$1.1 million to implement capital projects in the upper reaches of the Hutt River that are specified in the Hutt River Floodplain Management Plan (HRFMP). Two capital works projects are proposed this financial year; one at Bridge Road immediately downstream of the confluence of the Akatawara and Hutt Rivers, and the other in the vicinity of the Ebdentown drainage channel near Gibbons Street.

The urgent rock work at Maoribank bend was completed in April 2010 and negotiations with the New Zealand Transport Authority (NZTA) on the Riverworks Agreement (RWA) are still progressing.

NZTA are also commencing their planning for the extension of the wire rope median barrier from Whakatiki Street to Maoribank and staff are working with their consultants on this project.

4. Projects' update

4.1 Current projects

4.1.1 Bridge Road erosion protection

The proposed erosion protection is required to reduce the erosion risk to residential properties on Bridge Road and to Bridge Road itself. This work is recommended in the HRFMP and has been designed to meet the 1 in 100 year design standard specified for erosion protection.

Through the design process, both the design channel alignment and the type of erosion protection to be constructed were investigated. The design channel alignment was modified to take into account recent movements in the active channel since the development of the HRFMP. The preliminary design looked at various groyne types and reviewed the HRFMP recommended erosion protection measure of heavily strengthened vegetation. Rock groynes with a gravel core were selected and developed in the detailed design stage.

Five rock groynes with gravel cores will be constructed on the right bank of the Hutt River, immediately downstream of the confluence of the Akatarawa and Hutt Rivers as shown in **Attachment 1**. The groynes will be spaced at 50 metres intervals and constructed of 1,570 tonnes of B and 1,470 tonnes of C grade rock. The work will be constructed by GW operational staff using hired plant. Access to the site will be through the former Upper Hutt City Council carpark on the left bank. A ramp and road will be formed onto the gravel beach to allow rock to be delivered to site and stockpiled. Rock delivery is expected to commence by mid March 2011, with actual groyne construction scheduled for completion by 31 May 2011

The 2010/11 annual plan has a budget of \$392,000 available for these works with total estimated costs being \$389,500. The actual cost to supply and deliver the required B and C grade rock to site is \$236,320. Both the actual rock cost and estimated construction cost can be accommodated within the allocated budget.

4.1.2 Ebdentown erosion protection

The construction of erosion protection at Ebdentown will protect the outlet of the Ebdentown drainage channel, the Ebdentown training bank and State Highway 2 from erosion damage. The approximate extent of this work is shown in **Attachment 2**. The drain forms an integral part of the stormwater system that drains the Upper Hutt/Wallaceville area during high rainfall events. Any erosion damage to the training bank would also put State Highway 2 at risk.

Ebdentown is located within the RWA reach of the river so we expect this work to be funded on a 50:50 basis with the NZTA. The 2010/11 annual plan has a budget of \$685,000 available for this work. The total cost of this project is approximately \$1.3 million. NZTA are yet to confirm the availability of their share of the project cost.

Initial work to be completed by 30 June 2011 will take the form of a feasibility study. This study will present a preliminary design showing the extent and type of the erosion protection, estimated costs and an assessment of the benefits to SH2. This study will also form the basis for further funding discussions with NZTA. Detailed design, including resource consent preparation, and construction will be done during the 2011/12 financial year.

Once the results of the negotiations and the availability of funding from NZTA are finalised, the actual construction date will be set. An update report to the Subcommittee will be provided once NZTA's position is known.

4.2 Completed and ongoing projects

4.2.1 Maoribank urgent rock work

An investigation into the degradation of the riverbed between the Totara Park and Norbert Street Bridges noted that the area most at risk from erosion damage extends between Maoribank bend and the Norbert Street Footbridge. A programme of urgent mitigation measures was developed to 'hold' riverbed levels to ensure the integrity of the erosion protection structures upstream of the bend are maintained (refer Report 09.141). The most pressing mitigation measure was urgent rock work to prevent further erosion of the bedrock immediately upstream of the bend. Completed and proposed works are shown in **Attachment 2**.

Construction of this urgent rock work was completed over a two week period in April 2010. Work involved the placement of 600 tonnes of B and 650 tonnes of C grade rock. A 20 metre rockline was constructed upstream of the bedrock outcrop, to protect the existing lateral basket work. This rock work continues for a further 80 metres downstream of this point to infill the erosion 'gut' formed in the bedrock. The rock work has effectively formed a riverbed control weir to hold existing riverbed levels and to date has been performing well.

Further mitigation measures are programmed in 2013/14 for this reach. This work will involve the construction of a rock ramp upsteam of the bend and strengthening of the existing lateral basket work. A budget of \$1.68 million has been included in the Long Term Plan for this work.

4.2.2 River Works Agreement (RWA)

The existing RWA between Greater Wellington and NZTA provides for sharing maintenance and upgrade costs for the Hutt River between Silverstream and Maoribank. The existing agreement is due to expire in December 2011.

A new outline agreement containing the key principles has been prepared by Greater Wellington and was presented in October 2010. The agreement was largely well received by NZTA staff responsible for the state highway network in the Wellington area. However, an initial response letter from NZTA received on 26 October 2010 indicated a number of "legal hurdles" to the

Authority entering into a new agreement, including; funding of river works and their procurement.

Subsequent advice from Council solicitors showed in fact that Section 224 of the Public Works Act 1981 provides a very sound basis for a new river works agreement. Such an agreement would require the approval of the Minister of Finance and the relevant Minister of the Crown. Similarly NZTA clearly has all the necessary powers to protect and maintain State Highway 2, and contributing to the costs of river works is not beyond its powers. The Council's legal advice was subsequently forwarded to NZTA. The key issues to be resolved therefore are a willingness of NZTA to enter into a new agreement and NZTA's cost share.

The land on which significant sections of State Highway 2 exists is still in Greater Wellington ownership. It appears that NZTA may need to purchase this land to finally formalise State Highway 2 in this reach.

Flood Protection is waiting for a formal response from the NZTA on the proposal.

In the mean time Opus Consultants on NZTA's behalf is looking at the feasibility of extending the centre median barrier from the former Whakatikei shingle site to the Totara Park Bridge. This may involve widening the highway on the river side of the existing road formation, and requires Greater Wellington agreement. Flood Protection staff have indicated to both Opus and NZTA that we consider the State Highway 2 improvements, land ownership and the renewal of RWA are all linked and need to be progressed together to a satisfactory conclusion.

5. Communication

Upper Hutt City Council staff and residents adjacent to the Bridge Road erosion protection site have been advised of the project. Residents will be sent a further letter upon completion of this work.

The proposed erosion protection at Ebdentown will be discussed as part of the negotiations with NZTA on a renewed RWA.

6. Recommendations

That the Subcommittee:

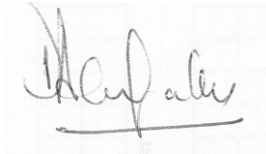
- 1. Receives the report.*
- 2. Notes the content of the report.*

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Attachment 1: Bridge Road erosion protection general arrangement plan
Attachment 2: Ebdentown erosion protection and Maori rock work location plan