



Report **05.598**
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Committee **Hutt River Advisory**
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Hutt River: Upper River Management

1. Purpose

- To inform the committee of river management issues in the reach of the Hutt River from Whakatikei Shingle to Norbert Street in Upper Hutt and to outline proposed investigations.
- To inform the committee of the improvements recommended in the Hutt River Floodplain Management Plan (HRFMP) for the reach

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

The key management issues for the reach of the Hutt River from Whakatikei Shingle upstream to the Norbert Street footbridge are management of the channel alignment and maintenance of stable bed levels.

From the Totara Park bridge up to the Norbert Street footbridge the river bed has degraded, or lowered, significantly since the current bed level monitoring system was set up in the late 1980's. This bed degradation is undermining existing bank stabilisation works. We still have repairs to complete following the January 2005 flood event.

From Whakatikei Shingle up to the Maoribank corner most of the river alignment works built during the construction of the River Road have now disappeared, or have been removed as they failed. We have to use more bulldozer time to keep the channel within the preferred alignment. The Hutt River Floodplain Management Plan does contain some recommended channel improvements for this reach. However they currently have a low priority in the

works programme and no capital funding is provided in Greater Wellington's current 10 year plan.

Another significant factor to be considered in the management of the reach from Whakatikei Shingle to Maoribank Corner is the River Works Agreement between Greater Wellington and Transit NZ. This agreement provides, in essence, that the costs of building and maintaining alignment works be shared 50:50 between the two parties. The current agreement expires on 12 December 2011.

4. Hutt River Floodplain Management Plan

The HRFMP provides for some significant improvements to this reach of the river. The improvements include:

- **New channel works.** Primarily this involves implementation of a wide channel option which will impact on the Awakairangi Park soccer grounds and the Totara Park horse paddocks. We believe the wide channel has the greatest chance of being sustainable in the long term.
- **Stopbank upgrades.** Some improvements to the right bank stopbank are proposed. No land purchase is required.

The total estimated cost of these improvements is \$6.46 Million (1999 dollars). None of these works are included in the GWRC's current 2003 – 2013, 10 year plan.

5. River works agreement

During the construction of the Hutt bypass road in the late 1980's the then National Roads Board and the Wellington Regional Council entered an agreement to cost share works of joint purpose.

The principal behind the agreement was that the National Roads Board would construct the new river works required for the Hutt Bypass road to be built within the Hutt River floodway. The responsibility for maintaining these works would lie with the Wellington Regional Council. The intention was that over 25 year term of the agreement (12 December 1986 to 12 December 2011) costs would end up being shared on a 50:50 basis.

When the River Works Agreement was drafted the possibility that additional works might need to be built, or that existing works might need major alterations or improvement was anticipated. There is a mechanism in the agreement for such projects to be jointly approved and funded on a 50:50 basis.

The current agreement expires on 12 December 2011, before the current time frame for implementing most of the improvements proposed in the HRFMP. It is therefore important that we take steps to get the agreement extended including a continued understanding of the need for the improvements provided for in the HRFMP.

6. Existing situation

Attachment 1 shows the upper river from Whakatikei Shingle to Norbert Street Bridge. This reach of the river can be separated into two distinct sections, those upstream and those downstream of the Totara Park Bridge.

These sections can be separated due to the differences in the type of management issues occurring. The two sections of the reach are:

6.1 Totara Park Bridge upstream to the Norbert Street Bridge

In this reach the key issue is the bed degradation (lowering) and its effect on existing protection works.

Existing protection works run along both banks upstream of Maoribank to Norbert St (see the thick red lines in **Attachment 1**). These works are getting undermined due to dropping levels. Downstream of Maoribank corner the river has degraded by more than 2m between 1988 and 2004. Some repairs were undertaken to the right bank works following the January 2005 flood, however further work is required. We propose to place rock under the remaining areas of undermined basket work.

Gary Williams, a specialist consultant river engineer was engaged in 2004 to take a preliminary look at measures to control the bed degradation upstream of the Maoribank Corner rock formation. This provides a direction for some possible solutions. Due to the scale, risks and financial consequences we believe a more detailed investigation is warranted.

Downstream of the Maoribank corner the width of the active channel has increased by more than 20m since 1987 due to the channel eroding the right bank adjacent to Awa Kairangi Park. Here the channel is close to the HRFMP 'design alignment' shown as the mauve lines in **Attachment 1**. Slightly further downstream works constructed in the early 1990's are beginning to fail.

For this reach an understanding of the long term prognosis for the bed degradation, and the options to arrest it, needs to be understood before investment in new edge protection works goes ahead.

6.2 Whakatikei Shingle upstream to the Totara Park Bridge

In this reach management of the alignment is the major issue, with bed degradation being the lesser issue.

Nearly all of the timber groyne/debris fence works constructed in the late 1980's as part of the Bypass project have gone. This has left much of the right bank adjacent to the horse paddocks vulnerable, and the left bank vulnerable where no rock lining exists.

The river has largely widened itself to the long term channel width proposed in the HRFMP over this reach (see **Attachment 1**). The question is when the channel should be stabilised in this location with permanent works. Largely

this will be determined by the assets at risk and funding availability. Presently there is only one location with a high priority for work.

The river is again threatening the outlet of the Ebdentown Drain, by eroding the training bank on its river edge. This drain is part of the stormwater system which runs under the River Road. The drain needs to function during high rainfalls, so the outlet needs to be maintained as is. A new rock lining should to be constructed against the outlet training bank to ensure its security. The cost of a 450 metre long rockline (yellow line **Attachment 1**) has been estimated and we propose to include this in the works programme for construction in 2009/2010. We hope to obtain Transit NZ's agreement to a 50:50 cost share for these works.

7. Proposed investigations and works

Our proposals for managing the Whakatikei Shingle to Norbert Street footbridge reach involve the following:

- A thorough investigation of degradation processes and possible solutions to arrest the degradation between Totara Park Bridge and Norbert Street Bridge. This investigation involves selecting a preferred option/s from a range of bed level management options for this reach. This investigation is proposed to be completed by 2007/2008 following a two year programme of work.
- Commence discussions with Transit NZ over the management issues facing the reach, the HRFMP proposals and the proposal to extend the term of the River Works Agreement.
- Review the priority for implementing the HRFMP channel improvements for the Whakatikei Shingle to Maoribank corner reach taking into account the outcomes of the bed level study, discussions with Transit NZ over the River Works Agreement, and a risk assessment.
- Construction of a new rocklining or similar, to protect the existing drain outlet adjacent to Ebdentown from erosion, in 2009/2010.
- Report back to the Hutt River Advisory Committee as the plans for the management of this reach firm up.

8. Key outcomes sought

The expected outcomes of the proposed investigation are;

- By June 2008, recommend to the Hutt River Advisory Committee on costs and priorities for implementing the proposed upgrade works in the reach from Maoribank Shingle to Norbert Street Bridge. The proposed upgrade works will be a mix of preferred bed level management options and HRFMP recommended measures. Once GWRC adopts the Advisory Committee recommendations, we will include any urgent works for consideration through the 2006-2016 LTCCP process.

- Aim to complete by June 2007, negotiations with Transit NZ to extend the current Road Works agreement and to confirm funding under the existing agreement for the proposed Ebdentown rock lining.

9. Communication

There is no direct communication with the community required as a result of this report. Once the investigations commence in the Totara Park Bridge to Norbert Street reach, we will consult with Upper Hutt City Council, Awa Kairangi Park users and any other interested parties.

10. Recommendations

That the Committee:

1. **Receives** the report.
2. **Notes** the content of the report.
3. **Notes** that the proposed bed level management investigations and the review of the HRFMP priorities in the Whakatikei Shingle to Norbert Street Bridge reach may result in a review of works priorities recommended in July 2005.
4. **Request** officers to enter discussions with Transit NZ regarding funding of alignment protection works adjacent to Ebdentown, as allowed for by Clause 17(1) of the River Works Agreement.
5. **Endorse** officers pursuing an extension of the River Works Agreement beyond 2011.

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Attachment 1: Aerial Photo with channel design alignment