



Report 09.122  
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Committee Council  
Author Ranjan Cyril, Engineer (Southern)

## **Lower Wairarapa Valley Development Scheme – revised development works programme**

### **1. Purpose**

To obtain the Committee's approval for proposed amendments to the LWVDS Development Works programme prepared in December 2003.

### **2. Consideration by Committee**

The matters raised in this report were considered by the Catchment Management Committee at its meeting on 3 February 2009 (report 09.06). The recommendations contained in this report have been endorsed by the Catchment Management Committee for the Council's consideration and decision.

### **3. 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.

### **4. Background**

The LWVDS commenced an extensive review of the scheme in July 2003. Part of the review was to determine the vulnerability of the scheme to flooding and to develop a programme to reduce the risk of failure of the scheme at identified high risk areas. The current 10 year development works programme was prepared in December 2003 and agreed to by the Scheme Committee.

Since development of the programme, major floods occurred in 2004 and 2006, which resulted in a need to review the scope and the nature of the programme in some parts of the scheme.

### **5. Structure of the Development Works Programme**

The Development Works Programme has been divided into 5 reaches based on different areas. They are:

- (a) Tauherenikau River
- (b) The Tributary Rivers & Streams to Ruamahanga and Lake Wairarapa
- (c) Ruamahanga River from Waiohine Confluence to Waihenga Bridge
- (d) Ruamahanga River from Waihenga Bridge to Tuhitarata Bridge
- (e) Ruamahanga River from Tuhitarata Bridge to Lake Onoke

## **6. Amended LWVDS Development Works Programme**

### **6.1 Items unchanged from the original programme**

The table in Attachment 1 contains the full 10 year Development Works Programme and details of the work proposed for each year. There are no changes proposed to the works programme for reaches 1, 3 and 5.

### **6.2 Proposed changes**

The changes proposed are two fold.

- (a) Either to delete or reduce the scope of works on four items on the Ruamahanga River, Waihenga Bridge to Tuhitarata Bridge.
- (b) To add two items of work to Reach 2 (tributaries) in the delta areas of the Turanganui River and Tauanui River.

The value of the works either deleted or reduced in the programme totals \$731,975 and the value of the additional works totals \$675,000 giving a net saving of \$56,975. It is proposed that the value of the saving be kept in the overall budget as a contingency item.

### **6.3 Items to be deleted or reduced in scope in**

#### **6.3.1 X-section 96 (Right Bank) – John Bargh (Hikunui Sill)**

Prior to the July 2006 floods this bank was very high and steep. The risk to the bank and eventually to the sill was from slumping. The remedial work proposed was to construct boulder groynes. However after the July 2006 floods it was decided to re-develop the whole sill and lower the bank.

The whole re-development was carried out with flood damage funding. Boulder groynes are no longer considered necessary. The risk to the bank is considerably less now and can be protected with willow planting. The planting work will be carried out from the maintenance budget.

The savings for this item totals \$158,025

#### **6.3.2 X-section 84 (Right Bank) – Owen Butcher**

This section of the bank had been vulnerable for a long period, well before the review was started. The remedial work decided for this location at that time was to construct a gravel berm, protected by boulder rip rap. This work was

reviewed by Gary Williams and decided that it was the best protection work for this site, bearing in mind the road, power line and a couple of houses beside the stopbank.

The work was urgent and improvements to parts of the bank continued throughout the review period using funds from the maintenance budget. Flood damage funding was also used for this work, following the July 2004 floods.

During the five year period from December 2003 about 210m of rock berm has been constructed and only another 190m remains to be completed.

The savings for this item totals \$250,000.

#### 6.3.3 X-section 81 (Left Bank) – R G Sutherland

This location was also identified as a high priority by Gary Williams. The original plan was to use boulder groynes to protect the eroding bank. As we needed to remove the willows from the opposite bank, which is the inside of the bend, it was decided to use these willows to complete willow cabling edge protection on the left bank. The stopbank at this location is not very close to the edge of the bank. It was considered that vegetative protection would be sufficient to protect the bank.

This work was much cheaper and was completed as part of the maintenance work programme. More planting is required behind the willow cabling, which will be completed under the maintenance programme.

The saving for this item totals \$173,950.

#### 6.3.4 X-section 77 (Right Bank) – Florus Bosch (now Devenport/Tobin)

The river at this location is very narrow. On the right bank the river has been outflanking a row of willows. The stopbank on part of the reach is very close to the edge and had been vulnerable for sometime. The remedial work decided for this location was boulder rip rap for the most vulnerable stretch, and a combination of boulder groynes and planting for the rest. The proposed work was reviewed by Gary Williams who agreed that it was the most practical protection work for this site. There is a road, power line and a house beside the stopbank. Therefore, relocating the stopbank would be more expensive.

The site was affected badly during the 2004 and 2006 flood events. Flood damage funding has been used for repair work, which formed part of the development work envisaged for this location.

The savings for this item totals \$150,350.

## **7.4 Items proposed to be added to the development works programme**

### **7.4.1 Diversion of Turanganui River**

A block of Crown land was reserved in 1932 for the purpose of future diversion of the downstream end of Turanganui River. Due to an oversight by the Commissioner of Crown Land at that time, this block of land had been given on long term lease to the adjoining landowner. The lease terms have proven to be unfavourable to the LWVDS.

The landowner has perpetual right of renewal of the lease. After lengthy negotiations, an agreement was reached with the leaseholder for the scheme to use this land in 5 lots over an 80 to 100 year period to divert the river. The new rent is calculated at the rate of 4.5% of the unimproved land value of the block. Although it is less than the market rate it is a reasonable rent. Half this rent goes to the scheme revenue and the other half goes to the Council general revenue. The agreement established some trigger levels which determines when the Scheme could divert the river.

Since this agreement was reached before the scheme review started, it was intended to include a scheme budget closer to the time when the first works were required. When the development works programme was prepared it was not included.

The X-sectional surveys of this river indicate that the trigger levels will be reached sometime in 2010/11 or 2011/12, and funding should now be included.

The estimated funding required for the first phase of the diversion is \$150,000, including compensation to the landowner for the development of the land.

### **7.4.2 Delta Development of Tauanui River**

The Tauanui River flows into Ruamahanga Diversion and carries a considerable amount of gravel. Prior to the LWVDS there was large scale gravel movement in the upper reaches due to deforestation of the upper catchment area. These areas have now been retired and the catchment area reforested. However there is a considerable amount of gravel still in the system and is occasionally added to by slips during heavy storms.

Tauanui gravel has to be either contained in the channel or removed from the river or otherwise it will get deposited in the Ruamahanga Diversion channel. The gravel movement in the upper reach of the river was identified during the review and provision made in the development works programme to trap it. However, the outlet area to the Diversion was overlooked partly as the area had been covered with willows and the problem was not very visible.

With clearing of the willows in the channel to improve flood capacity, it is evident that the area is overwhelmed with gravel and progressively moving into the Diversion channel.

The proposal is to purchase a 17 ha block of land adjacent to the river outlet (refer Attachment 2 aerial photograph), construct a stopbank on the south

western boundary and divert the river on to it to deposit the gravel. The material at the river outlet within the diversion channel is mostly silt and could be removed for the construction of the stopbank. This would be beneficial for the Diversion channel flow.

It is anticipated that with two areas for gravel deposition, the system will have a life of between 50 to 100 years depending on future gravel movement. The present landowner is willing to sell the above block of land at a reasonable market value.

The estimated cost of land purchase (subject to valuation) and the construction of the stopbank is about \$525,000.

## **8. Summary**

The four items of work in the Ruamahanga River between Waihenga and Tuhitarata Bridges, scheduled in the Development Works Programme, are to be either deleted or reduced in scope due to these works being completed fully or partially using Scheme maintenance or flood damage funds. This brings the total savings to \$731,975

Include two new items of work in the delta areas of the Turanganui and Tauanui Rivers totalling \$675,000.

## **9. Communications**

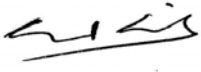
The above proposals were discussed with the Lower Wairarapa Valley Development Scheme Advisory Committee at its meeting on 12 December 2008. The Committee endorsed the changes and agreed with the following recommendations. The Council's decision will be conveyed to the Advisory Committee at its next meeting.

## **10. Recommendation**

*That the Council:*

- (1) **Receives** the report.
- (2) **Notes** the contents of the report
- (3) **Approves** the changes made to the existing development works programme amounting to a reduction of \$731,975, as set out in section 5.3 of this report.
- (4) **Approves** the addition of the two new items totalling \$675,000, as set out in section 5.4 of this report.
- (5) **Approves** the retention of the balance forecast in the development works programme as a contingency.

Prepared by:



**Ranjan Cyril**  
Engineer (Southern)

Approved by:



**Graeme Campbell**  
Manager Flood Protection

Approved by



**Wayne O'Donnell**  
Divisional Manager, Catchment Management Division

**Attachment 1: 10 Year Revised Schedule of Development Works in LWVDS**  
**Attachment 2: Aerial photograph of Tauanui River Delta Development**