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Report 02.12

File: N/6/23/3

20 December 2001

Report to the Landcare Committee
from Graeme Campbell, Project Manager, Flood Protection (Strategy and Assets)

Otaki Floodplain Management Plan : Chrystalls Bend Stopbank Upgrade

1. Purpose

To advise the Landcare Committee of the completion of the Chrystalls Bend Stopbank Upgrade Project.

2. Background

In April 1998 the Council approved the reconstruction of 300 metres of the Chrystalls Stopbank on the Otaki River. The Otaki Floodplain Management Plan had identified a 2km length of stopbank that needed upgrading from the Ramsbottom property at Chrystalls Bend to the State Highway 1 Bridge. The old stopbank provided a low 20–30 year level of protection to Otaki Township and had a high probability of failure due to its poor condition.

3. Design and Consents

Detailed design work started on 1 July 1998 with the site survey and negotiations with the two landowners affected, the Ramsbottoms and Williams Family Farms Ltd (Williams).

While constructing the 320 metres of stopbank gave a very secure structure over the replacement length, it still left a 180 metre section of the existing stopbank (also used as the haul road) with a crest up to 1 metre below the 100 year design level.

Council then agreed to reconstruct a further 180m of stopbank, giving a total improved length of 500 metres (Report PE 99.648). A layout plan showing the length of the reconstructed stopbank will be presented at the meeting. The new stopbank arrangement provides a nominal 100-year return period protection to Otaki township. The stopbank standard was described as “nominal” because the existing stopbanks downstream of the proposed works are high enough to provide the protection but there is a high likelihood that they will be undermined by erosion during a major flood. Future stages of the Otaki Floodplain Management Plan include constructing this stopbank further back from the river edge and extending existing bank edge protection work.

4. Land Purchase

Agreements to enter the properties to construct the works were obtained in mid 1999, along with the necessary resource consents. The agreements defined how the land (required for construction) would be valued once the work was completed.

When purchasing the Williams land the Council was able to buy the land required for the original 320 metres of work, that required for the 180 metre extension, and an additional area required for the future setting back of the stopbank. Significant economies were able to be made by purchasing all the land at that time rather than just the portion required for this work. Approval for this work was obtained through report PE 99.690. The cost of the additional land was offset by savings in the construction costs.

The purchase of the Ramsbottom land took considerably longer than anticipated and incurred a number of additional costs that had not been budgeted. A settlement was finally agreed in December 2001 and the survey plans lodged with Land Information New Zealand in January 2002. The additional costs for this land purchased are the reason for the overall \$7,239 unfavourable result.

5. Construction

The works were tendered in October 1999 with work starting December 1999. At that time construction tenders for this type of work were very competitive with this tender approximately 30 percent below estimate. No substantive issues arose during construction and the works were completed on programme in June 2000.

6. Costs

Table 5.1 below sets out the comparison between budget and actual costs for the work. The entire project was completed for \$572,749, \$7,239 over budget. This is considered an excellent result bearing in mind the project included reconstructing an additional 180 metres of stopbank and also purchasing the land necessary for the reconstruction of the next 650 metres of stopbank. The additional land purchased is currently being leased to the Ramsbottoms for grazing.

While stopbank construction was finished on programme, project expenditure was spread over a longer period of time. Some of the landscaping work was not completed until July 2000 and costs therefore fell into the 2000/01 financial year. Expenditure on asset purchase was also later than budgeted due to the delay in reaching a final settlement with the Ramsbottoms.

Table 5.1: **Summary of Expenditure**

	1999		2000		2001		2002		TOTAL		
	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Variance
Design and Construction Costs	65500	65239	482000	318000	10	77000	0	10	547510	460249	87261
Asset Purchase	18000	0	0	0	0	67500	0	45000	18000	112500	-94500
Grand Total									565510	572749	-7239

7. Communications

A number of press releases were prepared during the project and an official opening day was held on 28 October 2000 to celebrate completion of the works. The whole project (lagoon and haul road area) has potential to continue community involvement through the Otaki Friends of the River involvement.

8. Recommendations

That the Landcare Committee:

- (1) *receive the report.*
- (2) *note the contents of the report.*

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