

Report 16.397
Date 16 August 2016
File CCAB-10-188

Committee Environment Committee
Author Alistair Allan, Team Leader, FMP Implementation

Floodplain Management Plan Implementation: Annual Progress Report to June 2016

1. Purpose

To advise the Environment Committee of progress made to June 2016, in implementing the Hutt, Otaki and Waikanae Floodplain Management Plans, and the Lower Wairarapa Valley Development Scheme (LWVDS) upgrade.

2. Background

This is the fourteenth annual report on the implementation of the Western Floodplain Management Plans and the ninth annual report on the Wairarapa capital works.

2.1 Western Floodplain Management Plans

The Hutt, Otaki and Waikanae Floodplain Management Plans (western FMPs) were completed in 2001, 1998 and 1997 respectively. They recommend structural, non-structural and environmental measures to reduce the flood risk to the respective floodplains and improve the environment. Greater Wellington Regional Council (GWRC) has adopted a 40-year time frame to fully implement the three FMPs. Implementation of the FMPs commenced in 2000 and \$55 million has been spent up to the end of June 2016. The Flood Protection Department's 2015-2025 Operating Plan (the Plan) provides a further \$82 million for implementing the three FMPs.

2.2 Pinehaven FMP

The FMP development for the Pinehaven Stream was completed in June 2016. The total estimated cost of the FMP works is \$10 million and the implementation is now programmed to commence in 2016/17. This is a joint GWRC/Upper Hutt City Council (UHCC) project with UHCC leading the implementation. GWRC will fund 50% of these works through the normal General and Targeted rates and UHCC will fund the other 50% through their own rates. The LTP provides \$5.6 million as GWRC 50% share of total project cost (including inflation) for implementing the project. Three properties have

been purchased as the first steps in implementation of the Plan at a cost of \$1.3 million.

UHCC will commence the next stage of implementation by completing preliminary design works and notification of a Pinehaven and Silverstream district plan change. Lodgement of consents for the commencement of structural works will not commence until UHCC has made its decision in favour of implementing the plan change.

2.3 Wairarapa Capital Works

2.3.1 LWVDS

A major review of the LWVDS, completed in 2006, recommended a structural upgrade programme to improve the security of the flood defences in the lower Wairarapa valley. The original programme was for implementation over 8 years, commencing in 2007/08 and estimated to cost \$8.82 million. Generally the work involved strengthening river bank protections and upgrading of stopbanks on the Ruamahanga and Tauherenikau Rivers. In 2011, Council approved a revised cost estimate (\$12.7 million in 2013 dollars) and extended the completion date to 2022. A total of \$7.2 million has been spent to June 2016. The Plan provides a further \$10 million to 2025 including budget for commencement of implementing outcomes from a new FMP proposed to be developed for the LWVDS.

2.3.2 Waiohine FMP

The process for developing a FMP for the Waiohine floodplain commenced in 2008/09 and is progressing. Community consultation on the draft FMP was completed. A hearing on submissions scheduled for August 2016 was deferred due to the unavailability of some of the hearing panel. Officers are currently working with CDC and SWDC to consider how to proceed.

Implementation will commence once the FMP is completed. The GWRC LTP provides \$11.5 million for completing the project by 2020/21. The programme for 2014/15 was deferred until the FMP is completed. Strategic property purchase opposite Fullers Bend on the Waiohine River has been undertaken in advance of completing the plan as an opportunity arose to purchase the property at a good price.

2.3.3 Te Kauru Upper Ruamahanga FMP

The process for developing a FMP for the upper Ruamahanga floodplain commenced in 2013/14 and is progressing. Implementation will commence once the FMP is completed. The GWRC LTP provides \$12.5 million for completing the project by 2021/22.

3. Summary Progress

The FMP implementation is progressing well with the target of completing the western projects by 2040 and the Wairarapa projects by 2025. The Waiohine and Te Kāuru projects are yet to commence. **Attachments 1 to 4** provide a summary by project of implementation progress. Table 1 below shows the summary of financial progress to date and the forecast to 2025. The progress shown in Table 2, as ‘% complete’ to June 2015 and the forecast progress to

2025 was computed by discounting current dollars to dollars at the time of adoption of the respective FMPs.

Table 1: Expenditure Summary

River	Original FMP Total 40 year estimate (\$M) ¹	Expenditure in 2015/16(\$M) ²	Expenditure to June 2016(\$M) ²	Total expenditure forecast to 2025 (\$M) ²
Hutt	78.00 ¹	4.2	41.9	110
Otaki	12.07 ¹	0.48	8.2	17
Waikanae	8.69 ¹	0.25	4.9	10
Pinehaven	5 ¹	0.31	0.69	5
Total western FMPS	-	5.24	55.7	142
LWVDS	8.8 ¹	0.94	7.2	17.4
Waiohine	11.4 ¹	-	0.65	12
Total Wairarapa	-	0.94	7.8	29.4
Total	-	6.18	63.5	171

Notes:

- Hutt, Otaki, Waikanae and LWVDS budgets are based on 1999, 1998, 1997 and 2007 dollar (FMP dollars) values respectively. Waiohine and Pinehaven are 2008 and 2014 estimates.
- Expenditure figures are the sum of expenditure to date in current dollars and the budget (indexed) provided in the current Annual plan. The figures shown are current, and have not been backdated to dollar values at the time the FMP's were developed.

Table 2: Progress Summary

River	Budget/Expenditure FMP dollars		% Complete		
	Total original FMP estimate (\$M) ¹	Expenditure to June 2016 (\$M)	Actual to June 2016 in dollar terms	Forecast to June 2025 in dollar terms	June 2015 (Flood damages saved)
Hutt	78	26.1	33%	80%	35%
Otaki	12.07	5.92	49%	88%	70%
Waikanae	8.69	4.1	47%	81%	69%
LWVDS	12.7*	7.2	57%	100%	
Pinehaven	5	0.69	14%	100%	
Waiohine	11.4	0.65	5%	100%	

*LWVDS progress is on the basis of the 2013 estimate. LWVDS, Pinehaven and Waiohine expenditures are not discounted.

- Hutt, Otaki, Waikanae and LWVDS budgets are based on 1999, 1998, 1997 and 2007 dollar (FMP dollars) values respectively. Waiohine and Pinehaven are 2008 and 2014 estimates.

3.1 Non-structural measures

The Hutt and Kapiti flood hazard information has been included in Hutt City and Kapiti District Plans. The Kapiti flood hazard has been amended to reflect the reduced flood risk from the Chrystalls stopbank and Jim Cooke Park realignment works. The Wairarapa flood hazard information has been included in the Wairarapa Combined District Plan. Inclusion of flood hazard information in the UHCC district plan is taking more time than originally planned. Notification of the Mangaroa and Pinehaven Plan changes by Upper Hutt City Council has been delayed. It is now likely to be February 2017, after the Local Government elections, before the proposed district plan change is notified. GWRC will continue to support UHCC through this process.

3.2 Structural measures

3.2.1 Hutt River

By the end of June 2016, \$41.9 million had been spent on implementing the Hutt River FMP. The project is now about 33% complete on the basis of FMP dollars and progressing well.

The Ava to Ewen project, Belmont improvements, Whirinaki Crescent stopbank upgrade, the Bridge Road edge protection works and the Boulcott/Hutt stopbank project are complete.

The planning and design for the RiverLink project (City Centre stopbank and channel improvements) commenced in October 2012 and is progressing well. This project is currently scheduled for completion by 2025. Land purchase for the RiverLink project and the strategic land purchase at other critical locations in the Hutt River are continuing.

The benefits in terms of flood damages saved are estimated at 35% on the basis of works completed to date. The benefits on the basis of flood damages saved will be 66% when the City Centre upgrade project is completed.

3.2.2 Kapiti Rivers

By the end of June 2016, \$13.1 million had been spent implementing the Kapiti FMPs. The Otaki and Waikanae FMPs are 49% and 47% complete respectively on the basis of FMP dollars. In Otaki, the Chrystalls stopbanks, the Rangiuru floodgates, the Mangapouri culverts and about 52% of the river management works upstream of SH1 are complete. In Waikanae, the Kauri Puriri works, Otaihanga Road raising, Jim Cooke Park realignment and part of Otaihanga edge protections are complete. About 59% of the planned river management works are now complete. The Jim Cooke park stopbank works are proposed to be completed by June 2017.

3.2.3 LWVDS

Implementation of the LWVDS development works programme commenced in 2007/08. All works programmed up to 2015/16, amounting to approximately 57% of the revised total project cost of \$12.7 million, were completed. The total expenditure to June 2016 is \$7.2 million.

3.3 Environmental enhancement works

Significant environmental enhancement works have been completed with all the above capital projects. Environmental strategies have been completed for the Hutt, Otaki and Waikanae Rivers. These strategies generally include planting native trees, improving existing walkways or providing new walkways and general landscaping. The Boulcott/Hutt stopbank was designed and constructed to blend in with the golf course. A planting plan has been developed for the Ebdentown work and planting is programmed for September/October 2016.

A review of the Waikanae Environmental Strategy, undertaken as part of the 10 yearly review of the Waikanae FMP, is now complete. The Friends of the Waikanae and Otaki Rivers are playing a significant part in the implementation of these strategies. A review of the Hutt River Environmental Strategy commenced in late 2015 with the aim of completing the review by June 2017.

3.4 Emergency Management

Most of the emergency management measures identified in the FMPs to enhance the existing systems have been completed. Providing flood warning to local authorities and selected land owners is continuing on an on-going basis. A project is currently underway to review our flood warning service across the whole region, including consulting with stakeholders about what their needs are.

3.5 FMP progress reviews

All three western FMPS have adopted a 40 year timeframe to fully implement with progress reviews proposed every 10 years. The 10 yearly progress review of the Waikanae FMP is now complete and the review of Otaki FMP has commenced and the programmed Hutt FMP review will need to consider whether to delay until completion of the RiverLink project, complete a partial review or commence in 2018/19.

4. 2015/16 Targets and achievements

Good progress was made on all FMP projects during 2015/16. A total of \$6.18 million was spent during the year. The highlights for 2015/16 are summarised below.

4.1 Western FMPs

In the Hutt, the RiverLink project reached a major milestone in December 2015, with the Council adoption of an Integrated Concept Design option for preparing the preliminary design and refined cost estimates. This option was adopted following extensive community consultation on two options selected from 10 Integrated Concept Design options.

The preferred option for the RiverLink project designed to provide the 440 year standard of protection to the year 2,100 needs the acquisition of 117 properties. Affected landowners were advised that from December 2015 until physical works starts, Council, if approached by any landowner would be prepared to discuss early purchase of that property. Two properties, offered by landowners, were purchased by Council.

The planned edge protection works at Ebdentown, Upper Hutt were completed and planting works will be completed by October 2016. Approximately 200 metres of river edge upstream of Kennedy Good Bridge was strengthened to reduce the erosion risk.

NOR/Consent applications were lodged for the Jim Cook Park Stopbank reconstruction project in the Waikanae River. This application includes river improvement works within the reach. Flood damage repairs to the Tracey's Groynes in the Otaki River were completed.

4.2 LWVDS

The 2015/16 works programme was completed except for the Whakawhiriwhiri Stream upgrade work due to landowner agreement issues continuing. Major works completed included Pahautea Road property purchase, upgrade of Barrage Gates control gear and Tawaha culvert, rock rip protection and berm reduction works in Ruamahanga River.

5. 2016/17 works programme

5.1 Western FMPs

The total western FMP budget for 2016/17 is \$17.5million. The key western FMP projects include:

- Follow up work with UHCC to complete the district plan change to include the revised Pinehaven Stream, Hutt River and Mangaroa flood hazard in the Upper Hutt district plan.
- Progressing the Preliminary Design for the Riverlink (Hutt River City Centre Upgrade Project) and progress with aligning programmes (NZTA, HCC, GWRC) of the project partners.
- Progressing property acquisition for the Riverlink project in alignment with the project property strategy.
- Completing land transfers associated with the Boulcott/Hutt stopbank project.
- Completing the design for Hutt River interim edge protection adjacent to Port Road (upstream from the Waiwhetu Stream mouth to Seaview Road bridge).
- Completion of the Jim Cooke Park stopbank reconstruction project in the Waikanae River.
- Progressing with land entry negotiations for the lower Waitohu Stream channel works.
- Finalising an MOU with UHCC on cost sharing and progressing with the preliminary design for implementing the Pinehaven FMP.
- Completion of Hutt River Environmental Strategy review.

5.2 Wairarapa

The total budget for 2016/17 is \$1.0 million. The key projects for 2016/17 include:

- Complete land entry negotiations for the Whakawhiriwhiri Stream upgrade project and commence construction subject to landowner agreement.
- Marcel stopbank shifting project. This is unlikely to proceed due to landowner resistance. Alternatively Diversion of Tauanui River is planned subject to an ICM Plan for Tauanui Catchment being finalised before summer 2017.
- Scour protection work at Hikunui floodway on Simmonds property

The total Waiohine FMP implementation budget for 2016/17 is \$0.5 million. The FMP is, however, still only in draft form. Consultation on the draft FMP was completed and awaits a hearing before Council approves the FMP. The implementation works will be deferred until 2017/18 to allow completion of the plan.

6. Activities proposed to 2017 to 2025

The Flood Protection 2016-2025 Business Plan provides a total of \$129 million to implement the Hutt, Otaki, Waikanae, Pinehaven, Waiohine and Te Kauru FMPs and the LWVDS development works. The programme also includes completing the 10 yearly progress reviews of the western FMPs.

6.1 Hutt

The programme provides for progressing with upgrading of all stopbanks on both banks of the Hutt River and the river channel from Kennedy Good Bridge to Ewen Bridge to provide the Hutt River FMP recommended standard of protection to the Hutt CBD, the central residential areas and the western residential areas from Melling to Petone. The project is currently scheduled for completion by 2025. However, the timing for completion is dependent on the land acquisition, funding and the progress with HCC's Making Places project and NZTA's Melling Intersection Project.

The projects programmed for Lower Hutt also include completion of the Waiwhetu FMP and works in the river channel from KGB to Taita in the Hutt River. No budget has been included for the implementation of the outcomes of the Waiwhetu FMP because of the uncertainty over any potential measures necessary or being reasonably able to be implemented

The Hutt River projects programmed for Upper Hutt include the Maoribank river bed stabilisation, Ebdentown edge protection works and Pinehaven Stream improvements.

6.2 Waikanae

In Waikanae, the Jim Cooke Park stopbank project is programmed for completion by 2017 and further environmental enhancement works will continue through the period. Investigations on the remaining FMP works will also continue during this period.

6.3 Otaki

The programme provides for completing the Lower Waitohu Stream project, the south bank and north stopbank improvements and further bank edge protection works. Further environmental enhancement works will continue through the period.

6.4 Wairarapa

The programme provides for completing the Waiohine Project by 2021 and the LWVDS development works schedule by 2025. Te Kauru FMP implementation is currently programmed to commence in 2017/18 for completion by 2023. This programme will be adjusted to accommodate the process being developed to complete and seek endorsement of the Te Kauru FMP

7. Communication

This report is written primarily for internal purposes. However, a copy will be sent to HCC, UHCC and Kāpiti Coast District Council for their information.

8. The decision-making process and significance

No decision is being sought in this report.

This report provides an update on progress made with implementing the floodplain management projects and confirms that we are meeting the service improvement plans set out in the Council's Long Term Plan.

8.1 Engagement

Engagement on these matters is unnecessary.

9. Recommendation

That the Committee:

- 1. Receives the report.*
- 2. Notes the content of the report.*
- 3. Notes that the respective Territorial Local Authorities will be provided with an update of progress in their areas.*

Report prepared by:

Alistair Allan
Team Leader, FMP
Implementation

Report approved by:

Graeme Campbell
Manager, Flood Protection

Report approved by:

Wayne O'Donnell
General Manager, Catchment
Management

- Attachment 1:** Hutt FMP Summary Progress Table
- Attachment 2:** Otaki FMP Summary Table
- Attachment 3:** Waikanae FMP Summary Table
- Attachment 4:** LWVDS Summary Progress Table