



**greater WELLINGTON**  
**REGIONAL COUNCIL**  
**Te Pane Matua Taiao**

If calling please ask for: Democratic Services

6 September 2017

## **Te Kāuru Upper Ruamahanga River Floodplain Management Plan Subcommittee**

Order Paper for meeting to be held in the Choice Room, Greater Wellington Regional Council, 34 Chapel Street, Masterton on

**Tuesday, 12 September 2017 at 10.00am**

### **Membership of Committee**

Bob Francis (Chair)

Cr Barbara Donaldson

Cr Adrienne Staples

Deputy Mayor Graham McClymont

Cr Brian Deller

Siobhan Garlick

Stephanie Gunderson-Reid

Kate Hepburn

David Holmes

Janine Ogg

Rawiri Smith

Michael Williams

Greater Wellington Regional Council

Greater Wellington Regional Council

Masterton District Council

Carterton District Council

***Recommendations in reports are not to be construed as Council  
policy until adopted by Council***

## Te Kāuru Upper Ruamahanga River Floodplain Management Plan Subcommittee

Order paper for the meeting held on Tuesday, 12 September 2017 in the Choice Room, Greater Wellington Regional Council, 34 Chapel Street, Masterton at 10.00am

### Public Business

		Page No
1.	Apologies	
2.	Declarations of conflict of interest	
3.	Public participation	
4.	<a href="#">Confirmation of the minutes of 13 June 2017</a>	<b>Report 17.209</b> 3
5.	<a href="#">Proposed buffer management in the Te Kāuru catchment</a>	<b>Report 17.309</b> 6
6.	<a href="#">Te Kāuru Upper Ruamahanga FMP updated project programme report</a>	<b>Report 17.311</b> 16
7.	<a href="#">Te Kāuru Upper Ruamahanga FMP Project Manager's Report</a>	<b>Report 17.310</b> 21
8.	<a href="#">Exclusion of the public</a>	<b>Report 17.323</b> 28

### Public Excluded Business

9.	<a href="#">Waipoua Masterton Urban Area Project Group update</a>	<b>Report PE17.307</b> 29
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**Please note that these minutes remain unconfirmed until the Te Kāuru Upper Ruamahanga River Floodplain Management Plan Subcommittee meeting on 12 September 2017**

**Report 17.209**

13/06/2017

File: CCAB-12-212

**Draft minutes of the meeting of Te Kāuru Upper Ruamahanga River Floodplain Management Plan Subcommittee meeting held in the Choice Room, Greater Wellington Regional Council, 34 Chapel Street, Masterton on Tuesday, 13 June 2017 at 10.05am**

**Present**

Bob Francis (Chair), Councillor Donaldson (Greater Wellington Regional Council), Councillor Staples (Greater Wellington Regional Council), Councillor Deller (Carterton District Council), Councillor McClymont (Masterton District Council), Siobhan Garlick, Stephanie Gundersen-Reid, David Holmes, Janine Ogg, Rawiri Smith and Michael Williams.

**Public Business**

**1 Apologies**

*Moved*

*(Bob Francis/ Cr Donaldson)*

*That the Subcommittee accepts the apology for absence from Kate Hepburn.*

The motion was **CARRIED**.

**2 Conflict of Interest declarations**

There were no declarations of conflict of interest.

CCAB-12-212

3 **Public Participation**

There was no public participation.

4 **Waipoua Masterton Urban Area Project Group establishment and terms of reference**

Francie Morrow, Project Manager – Floodplain Management Plans, spoke to the report.

**Report 17.186**

File: CCAB-12-198

*Moved*

*(Bob Francis / Cr McClymont)*

*That the Subcommittee:*

- 1. Receives the report.*
- 2. Notes the content of the report.*
- 3. Establishes the Waipoua Masterton Urban Area Project Group.*
- 4. Adopts the terms of reference for the Project Group as set out in Attachment 1 to this report.*

The motion was **CARRIED**.

5 **Te Kāuru Upper Ruamahanga FMP updated project programme report**

Francie Morrow, Project Manager – Floodplain Management Plans, spoke to the report.

**Report 17.187**

File: CCAB-12-199

*Moved*

*(Cr Donaldson/ David Holmes)*

*That the Subcommittee:*

- 1. Receives the report.*
- 2. Notes the content of the report.*
- 3. Requests that officers investigate and prepare a revised project programme, with work being completed in early 2019, and bring this to the next meeting for the Committee to consider.*

The motion was **CARRIED**.

CCAB-12-212

6 **Te Kāuru Upper Ruamahanga FMP Project Manager's Report**

Francie Morrow, Project Manager – Floodplain Management Plans, spoke to the report.

**Report 17.179**

File: CCAB-12-197

*Moved*

*(Cr Staples/ Cr Donaldson)*

*That the Subcommittee:*

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

The motion was **CARRIED**.

The meeting closed at 11.10am.

Bob Francis  
(Chair)

Date:

CCAB-12-212



**Report** 2017.309  
**Date** 23 August 2017  
**File** CCAB-12-215

**Committee** Te Kāuru Upper Ruamahanga FMP Subcommittee  
**Authors** Francie Morrow – Project Manager Floodplain Management Plans

## Proposed buffer management in the Te Kāuru catchment

### 1. Purpose

To present and seek endorsement of the proposed buffer management approach for the Te Kāuru Upper Ruamahanga Floodplain Management Plan (the FMP).

### 2. Background

The development of the FMP is guided by GWRC's floodplain management planning guidelines. Part of this process includes investigating river management options.

Currently, river edge envelopes define the spatial extent within which the river is managed. This includes an 'inner management line' indicating the typical river channel, and an 'outer management line' defining the outer extent. The space between the inner and outer management lines is also known as a 'buffer'. It is proposed that this buffer will be allowed to erode from time to time in flood events and/or may be planted. GWRC has always undertaken to protect land beyond the outer management line from erosion in small to moderate floods. Note that this is regarding erosion extents whereas flood extents may be well beyond this line. Erosion that occurs during large flood events is treated reactively and with urgency if it is beyond or approaching the outer management line. This level of service has never been formally defined, but in the draft FMP it is proposed to manage the envelope so that erosion of the land outside the buffer is protected to an indicative 20-year level of service.

The most significant change to the proposed river management is the implementation of the buffer management approach in the Te Kāuru catchment. The outer management line will continue to be managed to a 20-year level of service. To deliver this service, heavy machinery will continue to be used to intervene in channel erosion and accretion process. However, the intent is to make changes to the way these interventions are managed, so as to maximise natural river processes within the management corridor. The change

to a buffer management approach is being proposed with the aim of achieving the vision and aims of the FMP, based on the following factors:

1. economic
2. resilient communities
3. cultural
4. natural spaces/processes
5. community needs and amenity.

### **3. Management lines history and theory**

An investigation into the history and theory of the management lines has been undertaken. A summary of this work is included as [attachment 1](#) of this report.

### **4. Buffer management – hierarchy of intervention**

To assist with decision making, a hierarchy of intervention has been developed with links to river management tools. This hierarchy is still under development but the general concept is that where erosion risk is to land within the buffer, the scale and type of the works used would be limited to those which result in a low risk of adverse impact (as assessed from the four step process described within the FMP). As the risk presented by a particular situation increases, the range of tools and potential impacts available for the intervention also increases to include tools assessed as having medium and high risks of adverse impacts.

This process provides an effective way of aligning the risks that the situation presents with the potential adverse impacts associated with the intervention. In effect, this will mean that low risk situations, such as minor erosion of land within a buffer where there is no critical infrastructure, can only be managed with tools that have a low risk of adverse impacts. At the other end of the scale, if there is a high risk situation, such as breaching of the outer management line or immediate risk to critical infrastructure, then all of the tools are available - including those with a high risk of adverse impacts.

### **5. Benefits and risks of the proposed approach**

The key features of the proposed method include:

1. Continued provision of flood hazard mitigation and erosion protection for land beyond the buffers (using sustainable management approaches);
2. More equitable distribution of scheme resources; and
3. Enhancing environmental and cultural values of the rivers by allowing more expression of natural river processes, where possible, and attempting to minimise the frequency of in stream works.

It is estimated that the transition to a new river management approach will take decades overall, and ten years or more at a particular location, depending on the site. On-going monitoring and review, aligned with the river management consent process, will be established. A full review within 20-years is proposed to assess the success and value of the new method, unless there is a significant reason for an earlier review. A strategy for implementation of the buffers will be developed as part of the implementation phase of the FMP, including who is affected, how it will be implemented and likely costs.

The proposed approach involves less frequent, but potentially larger, interventions. It is difficult to quantify the cost of the change due to uncertainties of the processes in the natural environment. Multiple intangible benefits have been identified and are expected to outweigh the costs.

## 5.1 Benefits

The specific benefits and opportunities identified for the new approach to buffer management include:

- *Equity and social benefit* - River scheme benefits will be more equitably distributed if all landowners provide space for planted buffers. In the current situation, landowners who do not provide the space for buffers receive the highest level of scheme expenditure. Reactive works are often required on properties where buffers have not been provided to control erosion and this is placing an unequal cost burden to other landowners within the scheme.
- *Increased environmental value of the rivers* – There is good evidence to show that by allowing the river more room to move, ecosystems and biodiversity are improved as a result of more diverse aquatic and riparian habitat and better connectivity between terrestrial and aquatic ecosystems. A naturally meandering river creates more variety of flow velocities, depths, and temperature, which supports greater habitat diversity than is generally available in restricted or highly managed river channels. Such natural character and conditions provide for more variety in aquatic life. Riparian plants provide food and shelter for terrestrial ecosystems.
- *Increased cultural value* – Allowing the rivers to express more of their natural character, behaviour and form enhances their mana and is aligned with the general principles of kaitiakitanga (guardianship of, and caring for, the river).
- *Improved recreational and amenity value* – It is anticipated that improved natural character will support more birds and fish, and improved water quality will enhance recreational value of the rivers. Anglers and hunters may have a better chance of catching a fish or shooting a duck. Natural character increases amenity value and visual appearance of the waterways.
- *Economic opportunities* – could include revenue from the honey industry (vegetated buffers produce food for bees). Additionally, according to reports from landowners in the Taranaki region, vegetated buffers may increase productivity in some instances. Planted buffers may also potentially increase property value because they provide shade and shelter for the stock, thus



increasing grazing time, and buffers can improve the appearance of the property.

## 5.2 Risks

A number of risks associated with the change have also been acknowledged:

- There is a risk that monitoring and then intervening later will cost more and may be more intense for the river environment compared with more frequent, smaller interventions. The size and nature of this depends on future natural processes in the catchment which are difficult to predict.
- It is also recognised that the prospect of losing currently productive land within the existing buffer is a potentially unpalatable concept for some landowners.
- Environmental risks include potential increase of pest animals and plants within larger planted buffers.
- There are also risks inherent with being able to meet the proposed level of service, i.e., protection of land beyond the outer management line to an indicative 20-year level of service.
- Additionally, there may be difficulties with performance monitoring of the revised approach. Base line data will need to be collected to allow a comparison for the 20-year review.

A report describing the benefits, opportunities and risks associated with the proposed change to buffer management will be presented at a later date.

## 6. Summary

- The proposed approach is a change from the status quo approach of close management within the inner management line to allowing the river to meander to a greater extent but within the buffer and outer management line
- There is uncertainty about the costs and there are some risks associated with taking a different approach that we haven't tried before but it is believed these risks can be managed
- Proposed approach is a general concept (common tool) and a framework is proposed for implementing it on a site-by-site basis
- It will take a long time to implement. We will monitor it as we go. It can be modified and isn't irreversible.
- This has not been consulted on in full and won't be until we consult on the draft FMP; however, the proposed approach seems broadly in line with outcomes from Whaitua consultation but the FMP landowner focus group raised concerns about this approach

## **7. Communication**

The information in this report has previously been discussed with the TKURFMP Subcommittee and a focus group of landowners within the Te Kāuru catchment.

## **8. Consideration of Climate Change**

The matter requiring decision in this report has been considered by officers in accordance with the process set out in the GWRC Climate Change Consideration Guide.

### **8.1 Mitigation assessment**

*Mitigation assessments are concerned with the effect of the matter on the climate (i.e. the greenhouse gas emissions generated or removed from the atmosphere as a consequence of the matter) and the actions taken to reduce, neutralise or enhance that effect.*

Planted buffers have the potential to act as carbon sinks; however, they will always be vulnerable to erosion and cannot be considered long-term or permanent. Officers consider that the proposed buffer management approach has no impact on climate change mitigations.

### **8.2 Adaptation assessment**

*Adaptation assessments relate to the impacts of climate change (e.g. sea level rise or an increase in extreme weather events), and the actions taken to address or avoid those impacts.*

TKURFMP has concepts of long-term resilience and sustainability at its core. Climate change is being taken into account in planning and design decisions. The proposed buffer management approach itself has no particular bearing on climate change adaptation except as part of this wider setting.

## **9. The decision-making process and significance**

Officers recognise that the matters referenced in this report may have a high degree of importance to affected or interested parties.

The matter requiring decision in this report has been considered by officers against the requirements of Part 6 of the Local Government Act 2002 (the Act). Part 6 sets out the obligations of local authorities in relation to the making of decisions.

### **9.1 Significance of the decision**

Part 6 requires Greater Wellington Regional Council to consider the significance of the decision. The term 'significance' has a statutory definition set out in the Act.

Officers have considered the significance of the matter, taking the Council's significance and engagement policy and decision-making guidelines into account. Officers recommend that the matter be considered to have low significance.

Officers do not consider that a formal record outlining consideration of the decision-making process is required in this instance.

## 9.2 Engagement

In accordance with the significance and engagement policy, no engagement on the matters for decision is required.

## 10. Recommendations

*That the Subcommittee:*

1. **Receives** the report.
2. **Notes** the content of the report.
3. **Endorses** the proposed buffer management approach for the next draft of the FMP as set out in this report.
4. **Endorses** continued consultation with the landowner focus group and more widely with the scheme chairs.

Report prepared by:	Report approved by:	Report approved by:	Report approved by:
<b>Francie Morrow</b>	<b>Mark Hooker</b>	<b>Graeme Campbell</b>	<b>Wayne O'Donnell</b>
Project Manager – Floodplain Management Plans	Team Leader – Investigations, Strategy and Planning	Manager, Flood Protection	General Manager, Catchment Management

**Attachment 1:** TKURFMP Management lines – history, theory and hierarchy of intervention

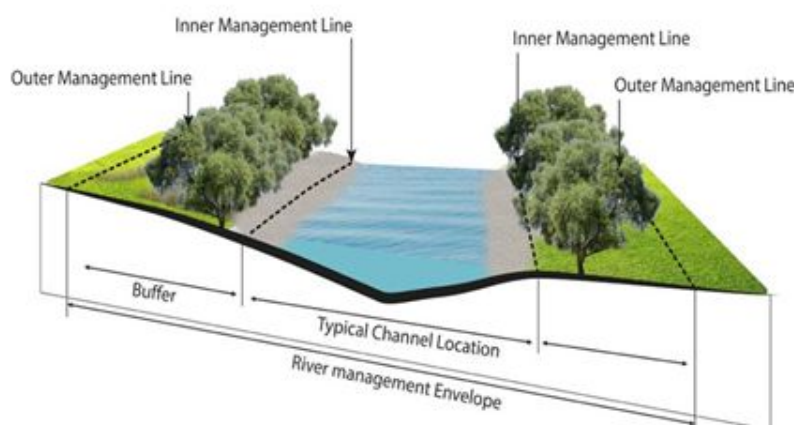
DATE 31 August 2017  
 SUBJECT TKURFMP Management lines - history, theory and hierarchy of intervention  
 FILE NUMBER CCAB-12-221

## TKURFMP Management lines – history, theory and hierarchy of intervention

### Background

The development of the TKURFMP is guided by GWRC’s floodplain management planning guidelines. Part of this process includes investigating river management options.

Currently river edge envelopes define the spatial extent within which the river is managed (Figure 1). This includes an ‘inner management line’ indicating the typical river channel and an ‘outer management line’ defining the outer extent. The space between the inner management line and the outer management line is also known as a ‘buffer’. It is proposed that this buffer will be allowed to erode from time to time in flood events and/or may be planted. GWRC has always undertaken to protect land beyond the outer management line from erosion in small to moderate floods. Erosion that occurs during large flood events is treated reactively and with urgency if it is beyond or approaching the outer management line. This level of service has never been formally defined, but in the draft TKURFMP it is proposed to manage the envelope so that erosion of the land outside the buffer is protected to an indicative 20-year level of service. The outer management line is related to erosion management and does not define a line to which flood protection measures, such as stopbanks, could be built. A separate analysis would be required to determine the appropriate location of any flood protection measures.



**Figure 1: River management envelope**

While the inner and outer management lines are required for river management purposes, only the outer management line will be included on maps within the TKURFMP so as to be clear to the public that the entire river management envelope is required for river management purposes.

The most significant change to the proposed river management is the implementation of the buffer management approach in the Te Kāuru catchment. The outer management line will continue to be managed to a 20-year level of service. To deliver this service, heavy machinery will continue to be used to intervene in channel erosion and accretion process, however the intent is to make changes to the way these interventions are managed so as to maximise natural river processes within the management corridor. The change to a buffer management approach is being proposed with the aim of achieving the vision and aims of the TKURFMP, based on the aims: economic; resilient communities; cultural; natural spaces/processes; community needs and amenity.

The degree to which this new management approach can be implemented varies across the Te Kāuru area. For example, in the Ruamahanga River upstream of Te Ore Ore Bridge there is ample space to develop river buffers. In the Te Ore Ore to Wardells Bridge reach there has been a higher level of investment historically that has held a river edge with erosion protection structures. This 'hard edge' approach is necessary for the protection of assets and it will not be practical to establish buffers in the same way. The clarity with this difference will come later in the Te Kāuru planning process when reach specific levels of service are defined.

### **History**

The management lines that will continue to be used for river management purposes were developed in the 1990s with a series of investigations for the Wairarapa Division of Wellington Regional Council regarding the Upper Ruamahanga, the Waipoua, and the Waingawa Rivers. The Eastern Hills river schemes (Kopuaranga, Whangaehu and Taueru) do not have management river lines because erosion control has, in the past, not been included as a scheme service. These schemes only control crack willow regrowth and undertake debris blockage removal.

### **Theory**

The management lines were specifically developed for individual sub-reaches that have recognisable homogeneity in terms of channel form and the physical processes occurring in that particular reach. Within each sub-reach the key physical characteristics, namely the slope of the river, the flow (mean annual flood), and the median sediment size (D50) have been used in a range of empirical formulas to determine three theoretical meander widths for the sub-reach. These are:

- 1) the dominant flow meander, which determines the overall meander pattern of the river channel and is influenced by floods larger than the mean annual flood (Q2.33);
- 2) the major; and 3) the minor threshold of motion meanders which occur within the overall meander pattern of the river channel (dominant flow meander). The major and minor thresholds of motion form at the threshold of sediment transport when the flow (and therefore shear stress) is insufficient to continue transporting river bed material (gravel, sand) downstream.

A process of engineering judgement and experience was then applied to the theoretically derived meander widths to determine optimal design widths for the channel in each sub-reach, in terms of what is likely to result in a reasonably stable future channel form. This process requires consideration of the longer term processes occurring in a particular reach including inspection of current and historic aerial photographs and channel cross section surveys as well as consideration of the likely future river management regime such as gravel build up or loss.

### Hierarchy of intervention

To assist with decision making, a hierarchy of intervention has been developed with links to river management tools. This hierarchy is still under development but the general concept is that where erosion risk is to land within the buffer the scale and type of the works used would be limited to those which result in a low risk of adverse impact as assessed from the four step process described within the TKURFMP. As the risk presented by a particular situation increases then the range of tools and potential impacts available for the intervention also increases to include tools assessed as having medium and high risks of adverse impacts (Table 1).

**Table 1: Hierarchy of intervention**

	<b>Situation</b>	<b>Intervention Type</b>	<b>Code of Practice/Common Tools</b>	<b>Timeframe for Completion</b>
<b>LOW RISK</b>	Risk to land within buffer	Limited intervention/ monitoring of risk by staff	Only able to use tools which will result in a low risk of adverse impacts (this will have the effect of limiting work in the wetted channel or in high value riparian areas)	Scheduled regular maintenance (annual work programmes)
<b>MEDIUM RISK</b>	Risk to outer management line	Moderate priority intervention	Only able to use tools which will result in low and/or medium risk of adverse impacts, or a limited quantum of high impact tools.	Incorporated within annual work programmes
<b>HIGH RISK</b>	Risk to life Risk to key infrastructure Outer management line breached	Immediate intervention	All tools available – with low, medium and high adverse impacts	Urgent – to be completed ahead of programmed work which may be practically deferred to allow for completion of priority, reactive work

Mostly this means that interventions for low risk and some medium risk situations would be limited to responses outside of the wetted channel.

This process provides an effective way of aligning the risks that the situation presents with the potential adverse impacts associated with the intervention. In effect this will mean that low risk situations, such as minor erosion of land within a buffer where there is no critical infrastructure, can only be managed with tools that have a low risk of adverse impacts. At the other end of the scale if there is a high risk situation, such as breaching of the outer management line or immediate risk to critical infrastructure, then all of the tools are available including those with a high risk of adverse impacts.



**Report** 2017.311  
**Date** 23 August 2017  
**File** CCAB-12-217

**Committee** Te Kāuru Upper Ruamahanga FMP Subcommittee  
**Author** Francie Morrow – Project Manager Floodplain Management Plans

## **Te Kāuru Upper Ruamahanga FMP updated project programme report**

### **1. Purpose**

To present and seek endorsement of an updated project programme and timeline.

### **2. Background**

The Te Kāuru Upper Ruamahanga Floodplain Management Plan (the FMP) is being developed, guided by the Greater Wellington Regional Council (GWRC) floodplain management planning guidelines. Te Kāuru is a very large catchment area when compared with previous floodplain management plans undertaken by GWRC. There are differing types of floodplain management required across this catchment: urban area (current emphasis on structure options), rural gravel bed rivers (primarily river management), and rural silt bed rivers (minimal intervention, willow removal, potential scheme expansion). This diversity within the catchment means that a more complex floodplain management plan process has evolved.

The process being undertaken is to produce three volumes of the FMP in draft format for consultation, and to combine the three volumes into a single document as a 'Proposed FMP' prior to the commencement of the final round of consultation.

#### **2.1 Draft FMP**

The contents of the three draft FMP volumes are:

- Volume 1 – Background and Overview (including Common Methods descriptions)
- Volume 2 – Rural Reach Specific Responses FMP
- Volume 3 – Waipoua Urban Responses FMP.



### 3. Updated programme

An updated project programme was presented to the TKURFMP Subcommittee at the June 2017 workshop. It was noted that the programme included public consultation of the FMP in mid-2019 and that this is the election period for the local body elections. Consequently, a revised programme has been developed to bring the completion of the FMP forward approximately nine months.

There are significant risks associated with the revised, shortened timeframe. The key risks to note are:

- Short timeframes to agree the flood hazard and options development through the Waipoua Officers Working Group and Waipoua Masterton Urban Area Project Group. This will be managed by working with the Waipoua Masterton Urban Area Project Group to agree to ownership of the process and deadlines.
- Resourcing of the Waipoua programme concurrently with the revisions of Volumes 1 and 2, and subsequent consultation. This will be addressed by including additional resources to the project team from wider GWRC, and consultants where appropriate.

### 4. Key stages

There are several key stages and milestones remaining to progress Phase 3 of the FMP process. These stages are broken into three sections: the rural reaches (Table 1); and the Waipoua urban area (Table 2); and the combined FMP document (Table 3). It should be noted that this includes an extension to the timelines previously reported, particularly with regard to the rural reaches, but a shortened timeframe for the urban and combined FMP stages.

**Table 1: Rural FMP stages**

<b>Rural FMP stages and milestones</b>	<b>Date</b>
Present an early working draft rural FMP to the Subcommittee for input and feedback	Completed: Dec 2016
Refine and confirm the options to a preferred option	October 2017
Present a draft rural FMP for public consultation to the Subcommittee for review	November 2017
Acceptance of the draft rural FMP by the Subcommittee	January 2018
<b><i>Decision Point : Seek endorsement from GWRC, MDC and CDC to proceed to public consultation</i></b>	<b><i>February 2018</i></b>
Public consultation on draft rural FMP	March to June 2018
Revision of draft rural FMP	Mid to late 2018

**Table 2: Urban FMP stages**

<b>Urban FMP stages and milestones</b>	<b>Date</b>
Masterton flood hazard agreement with MDC via the Waipoua Officers Working Group and Masterton Waipoua Urban Area Project Group	August -October 2017
<b><i>Decision Point : Seek endorsement from GWRC and MDC to proceed to option development</i></b>	<b><i>October 2017</i></b>
Completion of option combination report for urban Masterton	January 2018
<b><i>Decision Point : Seek endorsement from GWRC and MDC to proceed with drafting urban FMP</i></b>	<b><i>January 2018</i></b>
Present a draft urban FMP to the Subcommittee for consideration	March 2018
Revisions of draft urban FMP and endorsement from Subcommittee	May 2018
<b><i>Decision Point : Seek endorsement from GWRC, MDC and CDC to proceed to public consultation</i></b>	<b><i>May 2018</i></b>
Public consultation on draft urban FMP	June 2019
Revision of draft urban FMP	July 2019

**Table 3: Combined FMP stages**

<b>Combined FMP stages and milestones</b>	<b>Date</b>
Combination of rural and urban FMP documents into a proposed FMP	Mid 2018
Consultation and formal submissions and hearing on the proposed FMP	Late 2018
<b><i>Decision Point : Seek endorsement of the final FMP from the TKURFMP Subcommittee, GWRC, MDC and CDC</i></b>	<b><i>Early 2019</i></b>
Finalisation of Te Kāuru Upper Ruamahanga FMP	Early 2019
Recommend to GWRC Environment and Wairarapa Committees	Early 2019
Adoption by GWRC	Mid 2019

## 5. Communication

Proposed key project deliverables of Phases 2 and 3 which will be reported to TKURFMP Subcommittee are listed in Table 4.

**Table 4: Key project deliverables**

<b>Deliverable</b>	<b>Purpose and Content</b>
Visions and Aims report	Confirmation of issues identified through Phase 1 investigations
Phase 2 Summary report	A summary of the work during Phase 2, including outcomes of Subcommittee workshops and meetings, and the process of arriving at preferred options.
Draft FMP: Volumes 1, 2 and 3	A draft floodplain management plan for the Te Kāuru Upper Ruamāhanga catchment in three separate volumes for consultation.
Proposed FMP	A proposed floodplain management plan for the Te Kāuru Upper Ruamāhanga catchment in one document following revisions made as outcomes of the consultation periods.
Final FMP	A final floodplain management plan for the Te Kāuru Upper Ruamāhanga catchment in one single document.

A public consultation strategy for both rural and urban responses will be communicated with the Subcommittee prior to the consultation phases.

## **6. Consideration of Climate Change**

The matter requiring decision in this report has been considered by officers in accordance with the process set out in the GWRC Climate Change Consideration Guide.

### **6.1 Mitigation assessment**

*Mitigation assessments are concerned with the effect of the matter on the climate (i.e. the greenhouse gas emissions generated or removed from the atmosphere as a consequence of the matter) and the actions taken to reduce, neutralise or enhance that effect.*

Officers have considered the effect of the programme update will have no effect on the climate.

### **6.2 Adaptation assessment**

*Adaptation assessments relate to the impacts of climate change (e.g. sea level rise or an increase in extreme weather events), and the actions taken to address or avoid those impacts.*

Officers have considered the impacts of climate change in relation to the matter. Officers recommend that climate change has no bearing on the matter.

## 7. The decision-making process and significance

Officers recognise that the matters referenced in this report may have a high degree of importance to affected or interested parties.

The matter requiring decision in this report has been considered by officers against the requirements of Part 6 of the Local Government Act 2002 (the Act). Part 6 sets out the obligations of local authorities in relation to the making of decisions.

### 7.1 Significance of the decision

Part 6 requires Greater Wellington Regional Council to consider the significance of the decision. The term ‘significance’ has a statutory definition set out in the Act.

Officers have considered the significance of the matter, taking the Council's significance and engagement policy and decision-making guidelines into account. Officers recommend that the matter be considered to have low significance.

Officers do not consider that a formal record outlining consideration of the decision-making process is required in this instance.

### 7.2 Engagement

In accordance with the significance and engagement policy, no engagement on the matters for decision is required.

## 8. Recommendations

*That the Subcommittee:*

1. **Receives** the report.
2. **Notes** the content of the report.
3. **Endorses** the updated project programme outlined in this report.

Report prepared by:	Report approved by:	Report approved by:	Report approved by:
<b>Francie Morrow</b> Project Manager – Floodplain Management Plans	<b>Mark Hooker</b> Team Leader – Investigations, Strategy and Planning	<b>Graeme Campbell</b> Manager, Flood Protection	<b>Wayne O'Donnell</b> General Manager, Catchment Management



**Report** 2017.310  
**Date** 23 August 2017  
**File** CCAB-12-216

**Committee** Te Kāuru Upper Ruamahanga FMP Subcommittee  
**Author** Francie Morrow, Project Manager – Floodplain Management Plans

## Te Kāuru Upper Ruamahanga FMP Project Manager's Report

### 1. Purpose

To update the Subcommittee regarding general items that influence or are a part of the Te Kāuru Upper Ruamahanga Floodplain Management Plan (the FMP), as well as outlining other flood protection activities that are being undertaken within the catchment area by Greater Wellington Regional Council (GWRC).

### 2. Technical presentations

#### 2.1 Science of hydrological assessment

A presentation on the 'Science of hydrological assessment' was given to the TKURFMP Subcommittee by Dr Jack McConchie (Opus International Consultants) at a workshop on 13 June 2017. The presentation covered various aspects of hydrology and flood in New Zealand, and specifically in relation to the Te Kāuru catchment. The topics covered included:

- Measurement of precipitation
- The rain gauge network and rainfall gradient in the Te Kāuru catchment
- Streamflow and measurement in rivers
- Rating curves – calculation of flow
- The flow monitoring network in the Te Kāuru catchment
- Hydrographs and flow records
- Influences on and exacerbation of flooding
- Occurrence of floods and design floods
- Flood perspectives
- Climate change and potential effects on flooding

#### 2.2 Responsibilities for managing watercourses

Also at the 13 June 2017 TKURFMP Subcommittee workshop, Graeme Campbell (Manager of the Flood Protection Department, GWRC) gave a

presentation on the 'Responsibilities for managing watercourses'. This presentation discussed:

- Legislation and history
- The GWRC approach
- The watercourses agreement
- Levels of service

### **2.3 Community feedback from the Ruamāhanga Whaitua consultation process**

Between June and October 2016 the Ruamāhanga Whaitua project undertook public consultation with the purpose of seeking feedback on three questions, the third question was particularly relevant to the TKURFMP project: "How should we manage rivers to improve natural character while safe guarding community assets, income and households?".

The Ruamāhanga Whaitua posted a pamphlet to all community members within the Ruamāhanga Whaitua project area, requesting feedback. They also arranged nine community workshops and encouraged online feedback. There were over 250 participants in the engagement process and received over 330 comments relating to the relevant question. These responses came from community members both within the Te Kāuru catchment area, and south all the way to the river mouth.

A summary of this consultation was presented to the TKURFMP Subcommittee by Daria Golub at a workshop on 22 August 2017.

Although the consultation did not specifically mention flood protection, or the FMP, approximately 30 of the 330 comments from the community were in support of the current flood protection works. The public recognised the work completed for flood protection and river management. Willow planting and gravel management were mentioned. This indicates that the public are aware and have some understanding and appreciation of the flood protection works. Approximately the same amount of feedback criticised the current activities in the rivers. Some community members were not supportive of bulldozers in the rivers. They also expressed concerns about the charges for gravel extraction and desire to see more natural character.

Without information regarding the proposed buffer management approach in the draft FMP (as detailed in report 2017.308 of this meeting), approximately 75 comments were supportive of these buffer management activities. People appreciate the natural character of the rivers and would like to see more planting, native planting, more space for rivers and more natural river banks. There were also comments regarding public access to the rivers and a need for local communities to take responsibility for the rivers as well. Only two comments were clearly negative about establishing fully vegetated buffers along the river banks. Members of the public showed their concern about buffer zones "eating into" productive land and gorse spreading within buffer zones.

### **3. FMP development updates**

#### **3.1 Buffer management**

A separate report outlining the proposed buffer management methodology, including risks and benefits, is presented at this meeting (Report 2017.309). This information has been discussed with the TKURFMP Subcommittee during the course of the FMP development process, most recently at a workshop on 22 August 2017.

#### **3.2 Major Project Responses updates**

##### **River Road**

A revised option for River Road has been investigated and was proposed by Kyle Christensen at the 22 August 2017 workshop. Hydraulic modelling of widening and deepening the overflow path on the true left bank in this location indicated that only approximately 10% of total flows could be diverted, and only a small reduction in velocities on the outside bend was possible. This does not significantly reduce the threat of bank erosion at this location.

An option of widening the river on the true left bank provides a better opportunity to reduce the velocities on the true right bank, help protect the cemetery and old landfill sites, and preserve the existing overflow path. Additional rock protection is proposed for the residential properties near the confluence of the Waipoua River with the Ruamahanga River, and widening of the river on the true left bank will provide more room for this option. This revised option was supported by the TKURFMP Subcommittee and the next step is to undertake early consultation with these landowners prior to release of a draft FMP.

##### **MDC water supply pipeline**

Recognition of Masterton District Council's (MDC) emergency management plan was included into the major project response for the MDC water supply pipeline. The previous option presented to the TKURFMP Subcommittee included approximately \$1.2 million of rock work. The revised option includes approximately \$200,000 of rock work at the Black Creek confluence with the Waingawa River, and the emergency response option. MDC's emergency response includes three days' storage within the water supply system, which allows time to deploy a temporary pumping intake solution.

Overall this revised option provides reduction in the likelihood of failure at highest risk point while managing residual risk with emergency management. This option was revised with MDC and is supported by MDC and the TKURFMP Subcommittee.

##### **South Masterton stopbank and gateway**

Further discussion regarding the South Masterton stopbank and gateway area was held with the TKURFMP Subcommittee at the 22 August 2017 workshop. This discussion included recognition of the site as a contaminated site, the extent and degree of this contamination is currently unknown and needs to be

investigated to understand the costs and feasibility of possible future development. The flood risk at the site of the current stopbank overtopping and breaching is still a consideration. The preferred option is to:

1. Investigate the nature of the contamination
2. Extend the designation for a retreated stopbank outside of the current buffer
3. Prioritise planting of the buffers upstream and downstream of the State Highway 2 Bridge

Early consultation with the landowners will be a priority prior to release of the draft FMP for full public consultation.

### **Other Major Project Responses**

Work is continuing on the following additional Major Project Responses:

- Rathkeale
- Paierau Road
- Dakins Road
- Hood Aerodrome
- Waste Water Treatment Plant

#### **4. Operations and maintenance update**

David Boone will provide a verbal update at the meeting.

#### **5. Waiohine Floodplain Management Plan update**

At its inaugural meeting in August, the Wairarapa Committee recommended the establishment of a new governance and development structure for the Waiohine FMP. This was supported by the Environment Committee and approved by Council. The structure will involve a Steering Group (governance) and a Project Team (development).

Membership of the Steering Group includes: GWRC, CDC and SWDC Councillors; iwi representatives and community representatives from the Waiohine Action Group (the WAG). The Steering Group members are still being confirmed and our intention is to hold the first meeting in September. The makeup of the Project Team will be decided by the Steering Group.

Meanwhile, revisions to the flood hazard model and mapping are underway in consultation with technical representatives of the WAG. These revisions are in response to matters raised in the Independent Audit. We expect to bring questions around inputs, assumptions and uncertainties to the Project Team before being in a position to discuss draft model results with the community.



For more information on these topics, please see the reports listed here: <http://www.gw.govt.nz/committee-meetings-calendar/detail/7437>

## 6. Ruamāhanga Whaitua update

The Ruamāhanga Whaitua Committee (the Committee) is currently engaging with the community and stakeholders about their draft approach to managing discharges. As part of this work, the Committee has invited people to provide feedback through a survey: <http://haveyoursay.gw.govt.nz/ruamahanga-whaitua>. The Committee is also developing an approach to water allocation to test with the community and stakeholders.

Once the preferred policy approach work is complete, the Committee will move into their next phase of work drafting their freshwater objectives for each freshwater management unit. As current state and scenario modelling results are received from the Collaborative Modelling Project, they will be weaved into the Committee's decision-making.

It is expected that all major decisions for the Ruamāhanga Whaitua Implementation Programme (WIP) will be made before the end of 2017, with a WIP presented to Council early in 2018.

## 7. Water Wairarapa update

As a result of several intervening factors, GWRC is currently reframing Water Wairarapa to broaden it from a rural water scheme focus to encompass community-wide public benefits, especially in the light of recent climate change information.

The reframing emanates from Councillor feedback, followed by CIIL agreement to refocus the work programme. In the light of the recently released climate change projections and the proposed Natural Resources Plan, Councillors wanted evidence of a clear process to manage the valley's water quality and quantity resilience given more onerous environmental protection measures and a new climate regime

To address this, the project work programme will focus on the implications of:

- Climate change on water users based on new information from NIWA
- The WIP on land use change and water reliability for existing water users including urban water and stock water races
- The above on the resulting water supply & demand for public sector (non-rural) benefits
- A no-dam alternative i.e. status quo.

To achieve this, the immediate work programme will therefore:

- Establish the effects of climate change on the Ruamahanga valley's water resource, especially the reliability of water on existing and future water users

- Determine the effect of decreasing water reliability on farming production outputs and possibly other water dependent uses
- Model climate change scenarios, including a no-dam alternative, on FTE & GDP using current commodity prices
- Assess the implications/ interpretation of the modelling outputs
- Re-assess the project direction including the 'former' PDS work programme and whether any other elements should be included such as MAR, other water storage, water races, urban supply, etc.

Once the outputs are known and synthesised, and the implications determined, GWRC Councillors will be presented with the findings and an ongoing work programme for approval.

Both the timing and work programme tasks have yet to be confirmed; this will occur in about a month's time after which the work programme will commence about the beginning of October 2017.

## **8. Consideration of Climate Change**

The matters addressed in this report have been considered by officers in accordance with the process set out in the GWRC Climate Change Consideration Guide.

### **8.1 Mitigation assessment**

*Mitigation assessments are concerned with the effect of the matter on the climate (i.e. the greenhouse gas emissions generated or removed from the atmosphere as a consequence of the matter) and the actions taken to reduce, neutralise or enhance that effect.*

The effect on the climate of the FMP works being developed are not considered significant, and will be addressed through GWRC's procurement process which is undergoing review in 2017 and will encourage suppliers and contractors to minimise emissions.

### **8.2 Adaptation assessment**

*Adaptation assessments relate to the impacts of climate change (e.g. sea level rise or an increase in extreme weather events), and the actions taken to address or avoid those impacts.*

GWRC plans for climate change in assessing the degree of future flood hazard and in determining an appropriate response. There are only specific, limited situations in which climate change is not relevant (for example, planning for present-day emergency management).

In assessing flood hazard and determining appropriate structural and/or non-structural responses in areas subject to flood risk, GWRC is applying a rainfall increase of 20% to the flood hydrology in the FMP to account for climate change over the next 100 years.

Guidance from the Ministry for the Environment will be updated from time to time and our approach will be revised in line with any updates.

## **9. The decision-making process and significance**

No decision is being sought in this report.

### **9.1 Engagement**

Engagement on this matter is unnecessary.

## **10. Recommendations**

*That the Subcommittee:*

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

Report prepared by:	Report approved by:	Report approved by:	Report approved by:
<b>Francie Morrow</b>	<b>Mark Hooker</b>	<b>Graeme Campbell</b>	<b>Wayne O'Donnell</b>
Project Manager – Floodplain Management Plans	Team Leader – Investigations, Strategy and Planning	Manager, Flood Protection	General Manager, Catchment Management

**Exclusion of the public**

**Report 17.323**

*That the Subcommittee:*

*Excludes the public from the following part of the proceedings of this meeting namely:*

1. *Waipoua Masterton Urban Area Project Group update*

*The general subject of each matter to be considered while the public is excluded, the reasons for passing this resolution in relation to each matter and the specific grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 (the Act) for the passing of this resolution are as follows:*

<b><i>General subject of each matter to be considered:</i></b>	<b><i>Reason for passing this resolution in relation to each matter</i></b>	<b><i>Ground under section 48(1) for the passing of this resolution</i></b>
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|---|--|--|
| <ol style="list-style-type: none"> <li>1. <i>Waipoua Masterton Urban Area Project Group update</i></li> </ol> | <p><i>The information contained in this report relates to the proposed appointment of a member to the Waipoua Masterton Urban Area Project Group (the Group). Release of this information would prejudice the proposed member’s privacy by disclosing the fact that they have been nominated as a member of the Group. Greater Wellington Regional Council has not been able to identify a public interest favouring disclosure of this particular information in public proceedings of the meeting that would override the privacy of the individual concerned.</i></p> | <p><i>That the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding would exist under section 7(2)(a) of the Act (i.e to protect the privacy of natural persons).</i></p> |
|---|--|--|

*This resolution is made in reliance on section 48(1) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by section 6 or section 7 of that Act which would be prejudiced by the holding of the whole or the relevant part of the proceedings of the meeting in public are as specified above.*